Exhibit 4

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UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TENNESSEE
WESTERN DIVISION

JESSICA JONES et al. **v.** **VARSITY BRANDS et al.**	**Case No. 2:20-cv-02892-SHL-tmp** **Hon. Sheryl H. Lipman**

REBUTTAL EXPERT REPORT OF RANDAL HEEB, PHD

DECEMBER 14, 2022

HIGHLY CONFIDENTIAL PURSUANT TO PROTECTIVE ORDER[1]

[1] Note: All content herein citing to or relating to the production made by Nfinity Athletic LLC, shall be designated as "Highly Confidential – Attorneys and Expert Eyes Only" pursuant to Order Granting Joint Motion for Entry of Stipulated Protective Order in Fusion Elite All Stars, et al. v. Nfinity Athletic LLC, Case 2:22-cv-02226-SHL-tmp, ECF No. 30 (W.D. Tenn.), filed May 31, 2022 ("Nfinity PO").

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I. INTRODUCTION, QUALIFICATIONS, AND ASSIGNMENT

1. My name is Randal Heeb, and I previously filed a report in this matter on June 20, 2022.[2]

I.A. Qualifications

2. A copy of my curriculum vitae, which lists my previous testimony, is included as Attachment 1. It has been updated since the filing of my first report on June 20, 2022. FTI Consulting is being compensated for my time in this matter at a rate of $1,200 per hour. Neither my compensation nor FTI Consulting Inc.'s compensation depends upon the outcome of this litigation.

I.B. Assignment

3. Dr. Kevin Murphy filed a reply report in this matter on September 23, 2022.[3] I have been asked to respond to the opinions offered by Dr. Murphy in that report, including the methodologies and assumptions that form the basis for his opinions.

I.C. Materials Relied Upon

4. In forming my opinions, I relied on company documents and information produced in this litigation, on deposition testimony provided in this litigation, on the expert report submitted by Dr. Murphy, and on publicly available company, industry, and financial information. A complete list of materials I relied upon is included as Attachment 2.

II. EXECUTIVE SUMMARY

II.A. After Incorporating or Responding to Dr. Murphy's critiques, My Principal Opinions Remain Unchanged

5. In this report, I have addressed all the relevant criticisms directed by Dr. Murphy toward the opinions I expressed in my first report, and either incorporated appropriate adjustments or rebutted Dr. Murphy's critiques. My central opinions are unchanged and reinforced. A brief overview of these reiterated opinions is comprised in the remainder of this section.
6. Varsity's market power is present across the country. I have shown that Varsity's local market shares, which are so large as to imply a presumption of market power for most class members,

[2] Expert Report of Randal Heeb, PhD, June 20, 2022 (hereinafter Heeb Report).
[3] Expert Report of Kevin Murphy, PhD, September 23, 2022 (hereinafter Murphy Report).

are high in almost all locations across the country. Even in the few localities where Varsity does not exhibit monopoly power, the majority of class members are harmed by participation in events where Varsity does have such power. Other regional and local aspects of markets are controlled for econometrically. I am not aware of any aspects of these markets that likely matter but have not been taken into consideration and that would suggest either that the competitive situation is materially different across regions, or that a more accurate view of the anticompetitive effects of Varsity's conduct would be obtained from more localized analysis.

7. Few to no class members are completely unharmed by Varsity's anticompetitive conduct. The fraction of class members who may be unharmed is *de minimis*.
8. The product market for cheer competitions includes both All Star and school-sponsored competitive cheer events. This product market is regional. Multiple alternative regional market boundaries may appropriately delineate these regions. Based on *Brown Shoe* factors, I have provided regional market analysis based on the USASF regional market definitions. I have also shown that Varsity's implied market shares are ubiquitously high within these markets, and even within more localized regions. Varsity's market shares, even within these more localized regions, are so high as to create a presumption of market power in most such regions and raises a competitive concern about its market power in virtually all other local regions.
9. The mix of the various aspects of Varsity's anticompetitive conduct includes, among other things: predatory counter-programming "attacks" to weaken acquisition targets; accumulation of market power through anticompetitive acquisitions; elevation of acquired event prices above the competitive level; replacement of discontinued acquired events with new events at inflated prices; predatory and anticompetitive conditional bundled rebates; and intertwined governance between USASF and Varsity that belies the impartiality of USASF rule making. The aggregate effects of Varsity's various anticompetitive conduct gave Varsity the power, which it utilized, to increase the price of acquired events from their competitive benchmark level up to the level of Varsity's own, elevated event prices, to maintain Varsity's own prices at levels above competitive benchmarks, and to extend and preserve Varsity's market power.
10. Dr. Murphy criticized the empirical analysis in my first report comparing competitive benchmark prices with Varsity prices without adjusting for inflation, which may be relevant since benchmark prices and Varsity's own prices are not all contemporaneous. Throughout this rebuttal report, all analyses are conducted on inflation adjusted prices (adjusted to constant

2018 dollars). In conjunction with other adjustments, this change has little material effect on the analysis, including overcharges estimates.

11. Dr. Murphy identified additional acquired events data useful for competitive benchmark analysis that I had not included in my previous report. I have included data on each of these additional events, adding acquired events data from JAM Brands, Aloha, Spirit Celebration, All Things Cheer, Champion Spirit Group, Mardi Gras Spirit, and EPIC. He also identified information related to the absence of pre-acquisition discounts offered by Aloha that I have incorporated into my analysis. In isolation, elimination of Aloha pre-acquisition discounts slightly raises the prices of pre-acquisition Aloha benchmark events but does not materially change the conclusion of that analysis. In isolation, the additional data related to pre-acquisition events tends to slightly increase the estimate of overcharges. In conjunction with other adjustments, these new data do not materially affect the conclusions of my analysis.
12. After adjusting for inflation and including all events data and Aloha discount corrections recommended by Dr. Murphy, I repeated my previous multiple regression analyses. The results are qualitatively unchanged. Competitive benchmark prices are substantially lower than Varsity's own event pricing. Varsity frequently and significantly increased the prices of acquired events that it continued to produce for at least two seasons. Varsity discontinued some acquired events and introduced new events at significantly higher prices. As a result of this two-pronged strategy, to kill and replace acquired events and raise the price of those events that it continues, Varsity elevated acquired and new event prices to the level of its already supra-competitively priced legacy events.
13. All regression and other results in this report reflect consideration and, where appropriate, incorporation of comments, critiques and suggestions provided by Dr. Murphy, based on which I have generated updated estimates to those offered in my first report.
14. My estimate of the competition overcharge based on a competitive benchmark of acquired brands' pre-acquisition price levels is 27.4%, compared to 23.8% in my previous report, and is statistically significant at the 99.9% confidence level. This is based on a national estimate of common overcharges across the regional competition markets.
15. In my opinion, a common national overcharge estimate encompassing all regions is appropriate as it provides the most reliable and precise estimate of the impact on all class members, the overwhelming majority of whom are harmed by Varsity's conduct. In forming this opinion, I

considered evidence from several regression analyses that examined overcharges on a regional level. In my primary regression model of both national and alternative regional estimates, three of the five USASF regions (MW, SE, and SW) show overcharge estimates which are statistically significant, and statistically indistinguishable from each other or the national estimate. The estimate for the NE region is statistically significant, but higher than the national or other regional overcharge estimates. The overcharge estimate for the West is positive but lower than other overcharge estimates and is not statistically significant.

16. I examined a supplemental regression that included additional cost controls that vary through time, consistent with Dr. Murphy's suggestion. Because of deficiencies in the cost data provided by Varsity, only about half of the observations of Varsity and half of the observations of competitive benchmarks are available for this analysis. The estimate of the national common overcharge amount in this regression is 22.9% and is statistically significant at the 99.9% confidence level.
17. In the supplemental regression the regional overcharge estimates for all regions other than NE are statistically significant and statistically indistinguishable from each other or the common national overcharge. Most notably, the estimate for the West is shown to be indistinguishable from the national and other regional estimates, excluding NE.
18. A graphical depiction of the extent and coverage of Varsity's presumptive market power, even at the level of local competitions, shows the nearly national range of Varsity's market power. Using local market share estimates for 250-mile radius circles around Varsity event locations, corresponding to the "60% catchment" areas analyzed by Dr. Murphy most of the country is shown to be almost completely tiled by overlapping regions of Varsity presumption market power.
19. Throughout my report, I provide both conventional standard errors and robust standard errors and I based my reported statistical inferences on robust standard errors, in response to comments from Dr. Murphy. This change is immaterial to any opinion that I offer in this report.
20. My updated estimate of apparel overcharges, based on a competitive benchmark comparing Varsity shoe sales to those of Nfinity brand shoes, and applied to all apparel products, is 11%, updated from 10%, based on data processing refinements. There were no methodological changes.
21. My updated estimate of camp overcharges is 27.4%, based on the analytical inference that a

monopolist (Varsity) would set camp overcharges higher than competition overcharges. There were no methodological changes.

22. Conditional rebates like VFP and Varsity Network work by creating a large collection of rebate funds accumulated over many purchases that a customer stands to lose if the customer makes a single marginal decision to purchase from a rival. This makes the rebate incentive much more powerful than a discount applied separately to each purchase, even if the rebate percentage is no bigger than the discount.
23. Dr. Murphy analyzes the impact of conditional rebates using a methodology that is standard, based on individual price negotiations between a rival event producer and one customer of the monopolist. It shows that conditional rebates can create a situation in which, in order to lower its price enough to give a particular customer a better deal and make up for all the rebates that the customer stands to lose, the rival has to give a very big discount. It might even have to price below its own cost. Such customers are "foreclosed". If sufficiently many of the monopolist's customers cannot be profitably accessed, even by an equally efficient rival, this foreclosure is anticompetitive. Dr. Murphy calculates that Varsity's rivals are foreclosed from 8.8% of Varsity's customers.
24. There are two problems with this analysis. The less important but still significant problem is that it considers only one aspect of Varsity's anticompetitive strategy in isolation. Plaintiffs' theory includes many other forms of anticompetitive conduct. Even if only 8% of customers are foreclosed, this could tip the balance given the other conduct, so as to make the overall conduct anticompetitive. Likewise, many more than 8% are close to being foreclosed, such that other conduct would tip them into foreclosure.
25. The more important problem is that Varsity's rivals do not typically negotiate directly with each Varsity customer. In order to offer prices low enough to attract a Varsity customer, the rival would have to lower its registration prices generally. This would mean giving the same huge price reduction to all its existing customers. This makes discounting very costly for the rival. I have calculated, using Dr. Murphy's methodology and data, that 47.7% of Varsity's event entrants would be foreclosed to rivals unable to discount below the competitive benchmark. If the benchmark is exactly at the long-run equilibrium perfectly competitive price, then even an equally efficient rival would be foreclosed in the long run from almost half of Varsity's customers.

26. Conditional rebates should not be subtracted from the price of registration to calculate the dependent variable in overcharge estimated. Discounts that simply reduce the price of registration without conditions that depend upon other sales or considerations should be subtracted from prices to calculate net prices. In contrast to simple discounts, conditional rebates have a very different effect on the economics of a transaction, for the customer, for Varsity, and for rivals seeking to win that customer's business. The effective value of the rebate to each of these three different parties varies according to circumstances related to the conditions that are placed on the rebate, as well as other factors unrelated to the particular sale.
27. Simply subtracting the average value of such a rebate from the purchase price, as if it were a simple discount, is almost certainly going to distort any economic analysis using the resulting "price," including determining the anticompetitive effects, if any, from the rebate. The more accurate and appropriate treatment is to treat the price as the price, and account for the value of the rebate in the analysis of the transaction based on how it affects the incentives of the parties under different circumstances.
28. The treatment of damages in the context of conditional rebates is straightforward. Calculate the overcharge on the actual transacted price (without subtracting rebates), and then ultimately subtract the total value of any rebates received and retained by the entity that ultimately made the payment from the total damages due to that entity.
29. In my opinion, Dr. Murphy overstates the extent of disagreement between us regarding market definition. We both agree that cheer competition and camp markets are regional markets. We both agree that there is no unique appropriate boundary for such regional markets. Dr. Murphy testifies that as one travels away from one local event to a community just within his market-boundary from the first, that this distant event competes not only with the initial starting location, and all the events in communities between the two, but also with other nearby events that are still further away from the initial starting location. As one moves gradually across the country in any direction, the particular events that compete against each other, and the degree to which they compete, gradually changes. Those in the distance behind gradually fade from competitive relevance, and those in the distance ahead become more relevant. We both agree on that construct.
30. We disagree as to whether or not competitive conditions ever change so much as one moves incrementally through the country as to materially change the competitive situation so much

that different regional boundary definitions are required. Dr. Murphy asserts without support that the competitive situation might change that much. I have empirically demonstrated that it does not. In particular, I have shown that Varsity's local market share, which is so large as to imply a presumption of market power for most class members, is high in almost all locations.

31. Few to no class members were completely unharmed by Varsity's anticompetitive conduct. The fraction of class members who may be unharmed is de minimis.

32. Common evidence is available and appropriate to define the markets for cheer competitions, cheer camps, and cheer apparel, to determine Defendants' liability for antitrust injury, and to empirically estimate the overcharges paid by class members as a result of Varsity's anticompetitive conduct. While Dr. Murphy disagrees with many opinions advanced by Plaintiffs' experts on the elements of antitrust liability, injury and damages, he has not attempted to contradict my opinion that these disputes between the experts are conducted entirely with common evidence, nor has he argued that any element of antitrust analysis in this matter requires individual inquiry.

II.B. Relevant Facts Related to Varsity's Market Power and Competitive Effects are Not Considered and Addressed in Dr. Murphy's Analysis

33. Dr. Murphy's analysis fails to consider and address certain relevant facts relating to Varsity's market power and its ability to engage in anticompetitive conduct. Among these omissions are:

- Varsity acquired 19 of its largest rivals in the cheer competitions markets between 2004-2018.
- These acquisitions allowed Varsity to acquire 27 of the 33 World Bids Events that Varsity owned and operated by the end of the 2017-2018 season.
- Of the seven event producers that Varsity acquired between 2015-2018, it increased the average real price for all seven acquired brands by no less than 12% per brand, and by an average of 23% across all seven brands.
- More than 90% of the Varsity's competition customers attended a Varsity acquired brand event, and therefore paid higher inflation-adjusted prices relative to pre-acquisition competitive levels.
- Total participation in acquired brand events decreased from before acquisition to after acquisition.

- From the 2014-2015 season through the 2018-2019 season, Varsity attendance at its legacy events **decreased** by more than 2% overall, or roughly 0.5% per year on average (see Table 15).
- By the start of the 2018-2019 season, Varsity's market share of World Bids Events (by event count) equaled 79% (33 events out of a possible 42).
- More than 90% of Varsity's competition customers attended World Bids Events, and therefore paid higher prices relative to a competitive level (see Table 5).
- By the end of the 2017-2018 season, Varsity's event count market share of all All-Star cheer events equaled 56%, when comparing Varsity events to the total number of USASF-sanctioned events.
- Varsity's revenue market share for All-Star events, as calculated from the company's internal market research document, increased from 75% in September 2016 to 88% by the completion of its acquisition of EPIC in January 2018.

II.C. Dr. Murphy Does Not Calculate the Fraction of Uninjured Class Members

34. Dr. Murphy testifies that he has no opinion as to the fraction of Class Members that were injured (or conversely uninjured) by Varsity's conduct.[4]

35. Dr. Murphy testifies that, as a legal matter, no Class Members can suffer antitrust injury if he was unable to find any evidence of harm to competition.[5] He finds no harm to competition, at least in part, based on his assertion that the elevated prices observed for Varsity events and other products, compared to competitive benchmark prices of other producers, is not caused by the alleged illegal anticompetitive conduct, or is explained by other factors. If the Court ultimately determines that harm to competition occurred, Dr. Murphy offers no opinions about the extent of the resulting antitrust injury among the Class Members.

36. Varsity's presumptive market power, as represented by its market share and demonstrated by the supra-competitive prices that Varsity charges, is nearly ubiquitous throughout the country. I determined that only a *de minimus* fraction of Varsity customers attended no events in areas in which Varsity commands presumptive market power, associated with estimated

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[4] Deposition of Kevin Murphy, November 4, 2022 (hereinafter "Murphy Deposition, November 4, 2022"), 246:15-247:14 ("I didn't count up the numbers." "I didn't put a specific percentage on it.").

[5] Murphy Deposition, November 4, 2022, 242:18-24 ("I haven't found evidence that there's been antitrust harm here. So if there's not antitrust harm, I'm not a lawyer, but my understanding is there's not antitrust harm, there wouldn't be antitrust injury. You need one to get the other.").

Varsity sub-regional market shares greater than 50%. Many of those attendees were at events in areas where Varsity's market shares fall between 40%-50%, indicating cause for anticompetitive concern.

37. In addition, even those few-if-any customers who somehow avoided attending any cheer competitions over which Varsity exercised anticompetitive market power were likely harmed by paying inflated prices for Varsity apparel. Fewer than 10% of customers did not purchase any Varsity apparel during the Class Period.

38. Based on both pieces of evidence, I identify customers that may have been uninjured as those that made no cheer apparel purchases from Varsity during the Class Period and count the number of entrants from those gyms that attended Varsity competitions in CSAs with an effective Varsity market share less than 50% during the Class Period.

39. I calculate that the only group of Class Members that could possibly be uninjured during the Class Period comprises only 1.30% (in terms of revenue) of all Class Members.

40. In a refinement to my calculation of antitrust injury, I identify all CSAs in which the customer attended Varsity competitions during a particular season.

41. If a customer attended a Varsity competition in a CSA with an effective Varsity market share less than 50% and attended a different Varsity competition in a CSA with an effective Varsity market share greater than or equal to 50%, I identify such a customer as suffering antitrust injury during that competition season.

42. I also analyze competition customers based on whether they purchased Varsity apparel during the Class Period. I calculate that if Class Members uninjured by inflated competition prices are equally likely to make purchases of overpriced apparel as Class Members injured by competition overcharges (assuming that there are any Class Members unharmed by competition overpricing), then the expected fraction of uninjured Class Members is *de minimus* and no greater than 0.32% (in terms of revenue) of all Class Members.

II.D. The Relevant Product Markets and Geographic Markets that I Defined are Accurate and Reliable

43. The relevant product market for cheer competitions includes All-Star competitions, school competitions, regular season competitions, postseason competitions, World Bids Events, non-World Bids Events, 1-day competitions, and 2-day competitions.

44. My definition of the relevant product market for cheer competitions is confirmed by an

application of the Hypothetical Monopolist Test (HMT) and my analysis of Varsity price overcharge for competitions.

45. My definition of the relevant product market for cheer competitions is further corroborated by an examination of the *Brown Shoe* indicia: (1) industry or public recognition of separate markets; (2) the products' characteristics and uses; (3) unique production facilities; (4) distinct customers; (5) distinct prices; (6) sensitivity to price changes; and (7) specialized vendors.

46. Despite Dr. Murphy's repeated claims, I defined the relevant geographic market for cheer competitions in my first report, and do so here as well, to be regional markets according to the regional classifications as defined by USASF.

47. My definition of the relevant geographic markets is informed by my analysis of the fraction of entrants traveling inside its region for a cheer competition as opposed to outside its region.

48. Similar to cheer competitions, the relevant product market for cheer camps includes all types of cheer camps and the relevant geographic markets are regional according to the regional classifications as defined by USASF.

49. The relevant product market for cheer apparel is all cheer competition apparel, including uniforms, lettering, shoes, warmups, camp wear, and accessories. The relevant geographic market for cheer apparel is a national market.

50. My definition of the relevant product market for cheer apparel is confirmed by an application of the Hypothetical Monopolist Test (HMT) and my analysis of Varsity price overcharge for apparel.

51. My definition of the relevant product market for cheer apparel is further corroborated by an examination of the *Brown Shoe* indicia: (1) industry or public recognition of separate markets; (2) the products' characteristics and uses; (3) unique production facilities; (4) distinct customers; (5) distinct prices; (6) sensitivity to price changes; and (7) specialized vendors.

II.E. Monopoly Power

52. The economic mechanisms used to evaluate the sustainability of a price-fixing cartel in a case alleging price-fixing claims are not fully applicable to evaluate the conspiracy to monopolize claims in this case against a dominant firm monopolizing relevant antitrust

markets.

53. In particular, barriers to entry is not a prerequisite or necessary condition for anticompetitive effects and harm to competition for a conspiracy to monopolize claim, and I make no claims that barriers to entry are prerequisites or necessary.

II.F. Competitive Effects

54. The economic mechanisms that I analyze, not in isolation but the totality of the economic effects across all mechanisms, include: (1) acquisition of largest competitors in the cheer competitions markets; (2) use of conditional rebates schemes to lock-in gyms (the decision-makers) and withhold rebates from the indirect purchasers (parents); and (3) exploiting the relationships with venue operators and hotels to exclude rival event producers.

55. Varsity anticipated rival event producers' upcoming season of events and created counter-programming, what it called "attack events," to weaken its rivals and encourage exit, and thus making them easier to acquire.[6]

56. Varsity exploited its dominant market share and associated market power by using its relationship with venue owners and operators to require the venues to exclude rival event producers from hosting events for "60 days before or 90 days after" a Varsity event.[7]

57. Varsity exploited its market power through the conditional rebates scheme in the VFP rebate program to lock-in customers to Varsity events and apparel purchases. The effect of this scheme is to reduce the ability and incentive of rivals to gain business or compete away Varsity's supra-competitive price wedge and deters new entry by reducing the anticipated profitability of entrants.

II.G. Harm to Competition

58. Contrary to Dr. Murphy's claims, I show through empirical evidence that participation did not increase for events that Varsity acquired, but instead decreased by 42%. The reason for

[6] Deposition of Jim Hill, March 21, 2022, 118:2-14 ("To – to your question of attack events to maybe affect somebody's decision, there's one in particular that I can recall where the previous owner, Tammy Van Vleet, GSSA, and – Golden State Spirit Association. And she made this comment directly to me – and this is years ago – but, you know, 'I didn't want to sell, but I had to. You know, you guys were coming and it was either sell and – and get something out of it, or you put me out of business,' was her – was her terminology and opinion of why she chose to sell to Varsity when she did.").

[7] VAR00320890 (LeTard Exhibit 22), at -890 (email from Jeff Fowlkes to Tres LeTard dated Dec. 10, 2012: "The GWCC contacted me about several dates Billy requested which I was able to block because they were within the dates they protect for us. They do not allow anyone within 60 days before or 90 days after.").

his incorrect claim is that he considered the growth of average participation per event of the events that Varsity continued to operate but ignored the pre-acquisition participation of the events that Varsity discontinued. This incorrect observation that participation grew was the basis of Dr. Murphy claims that the acquisitions were pro-competitive.

59. Moreover, the participation in Varsity's legacy events decreased over the period from the 2014-215 season through the 2018-2019 season.

60. Dr. Murphy relies exclusively on a survey for his opinions that cheer participation increased over the relevant period. Yet, Dr. Murphy never analyzed the survey methodology to confirm that it was reliable, and anomalies in the survey results suggest the survey may not be reliable. The survey was conducted by a national organization for whom Varsity is the largest corporate sponsor. Varsity paid the national organization at least $350,000 per year for the 7-year period from 2003-2010, and it appears its financial payments have increased since then.

61. My empirical "before and after" price analysis compares the real prices for the same events both before and after they were acquired by Varsity. Across all acquired brand events, I calculated a Fisher ideal price index to measure the weighted average of the change in real prices and control for composition effects. I determined that the real price change equaled 24% across the seven event brands that Varsity acquired between 2015-2018.

62. My empirical analysis of the price overcharge in the cheer competitions markets compared the real prices for Varsity events to the real prices for a competitive benchmark consisting of pre-acquisition events operated by a rival event producer or operated by Varsity for a single season at prices set by the original producer.

63. The inclusion of cost controls and demand controls did not fundamentally change my overcharge estimates. I implemented a fixed effects methodology to control for other relevant economic factors for the different events.

64. I estimate average real price overcharge nationally across all five cheer competitions regional markets equal to 27%. The real price overcharge is statistically significant.

65. As I did in my first report, I applied a conceptual model to conclude that the price overcharge in the camps markets was greater than or equal to the price overcharge in the cheer competitions markets. This analysis incorporates the larger relative market share of Varsity in camps compared with competitions and applied my conclusion from the analytic model

that customer demand elasticity for competitions is likely greater than for camps, and Varsity's implied market power is likely higher in camps than in competitions.

66. My empirical analysis of the price overcharge in the cheer apparel market compared the prices for Varsity cheer competition shoes to the prices for cheer competition shoes from a rival apparel manufacturer, Nfinity. I estimate the price overcharge for shoes in the cheer apparel market equal to 11.0%. The price overcharge estimate is statistically significant.

67. I apply a conceptual model of monopolist bundle pricing and conclude that price competition (both from other cheer apparel sellers and from outside the cheer apparel market) is higher for shoes than for the two other major apparel categories: uniforms and lettering. Collectively, these three categories (uniforms, lettering, and shoes) make up 78% of total Varsity cheer apparel purchases from the six apparel categories: uniforms, lettering, shoes, warmups, camp wear, and accessories. Of the customers purchasing from at least three categories, 99% purchase lettering, 98% purchase uniforms, and 86% purchase shoes.

68. Thus, of the three major cheer apparel categories, shoes have the most customer switching and are thus the most price-sensitive category for Varsity. Hence, I conclude that the 11.0% overcharge for shoes represents a reasonable lower bound of the price overcharge for all other non-shoe Varsity products.

69. Not only have prices increased, causing antitrust injury for Class Members, but the quantity and quality of services offered have also decreased (fewer events, with reduced company investments in the quality of the events).

70. Varsity has intertwined itself and its employees into the governance of the USASF, decisions of which are highly relevant for the relative competitive position of Varsity compared to its rivals, and which are purported to be driven by a concern for athlete safety and not by a deference to Varsity's competitive interests. The safety of athletes in the competitive cheer ecosystem depends upon the independence and competent governance of USASF, which appears to have come under Varsity's monopolistic influence. Recent allegations of non-isolated incidences of abuse and sexual misconduct made in state and district courts through the Southeast, including allegations of misconduct, cover-up, or negligence by USASF and/or Varsity, would tend to undermine the credibility of Varsity's arguments that athlete safety is the paramount concern.

II.H. Common Impact and Class-Wide Harm

71. The anticompetitive conduct and the harm from such conduct is common to all Class Members across the cheer competitions regional markets.

72. Class Members attending events in local geographic areas (CSAs) for which the Varsity's effective market share is greater than or equal to 50% suffered antitrust injury from the anticompetitive price effects. As previously described, at most a *de minimus* fraction of Class Members did not suffer antitrust injury in cheer competition pricing according to my calculations of antitrust injury at the local geographic level (CSA). Additional antitrust injury was likely suffered by each class member through their purchases of camp attendance and cheer apparel at prices inflated by Varsity's anticompetitive conduct.

II.I. Common Issues Predominate

73. Regarding the predominance of common issues, on the economic issues and analyses that I have addressed in both of my reports, my opinions are unchanged - the issues of fact that are common to the class members predominate over questions and issues affecting only individual members My opinions on predominance of common issues remain unchallenged.

III. DR. MURPHY IGNORES THE EVIDENCE IN THIS CASE THAT ESTABLISHES ANTICOMPETITIVE CONDUCT, HARM TO COMPETITION, AND COMMON IMPACT ON THE CLASS

III.A. Dr. Murphy's Conclusions about Harm to Competition are Inconsistent with Facts of the Case

74. Dr. Murphy concludes "the data and other evidence in the record show no harm to competition or increased prices related to a harm to competition."[8] Dr. Murphy's main conclusions related to harm to competition are refuted by a review of the common facts and empirical evidence in this litigation. For example, first, Varsity maintains its own competition prices at monopoly levels that are substantially higher than competitive benchmark prices. Second, Varsity engaged in anticompetitive pre-acquisition "attacks" to weaken rivals and acquired its largest rivals in the cheer competitions markets, achieving presumptively anticompetitive market shares. Upon acquiring control through acquisition, Varsity elevated prices of the events that it continued to offer above their previous,

[8] Murphy Report, ¶ 23.

competitive levels. Third, Varsity discontinued some acquired events, and replaced them with new events at higher prices. Fourth, Varsity acquired 27 of the 33 World Bids Events that it came to operate by the end of the 2017-2018 season, where the 33 World Bids Events corresponds to a World Bids Events market share (by event count) of 79%.

III.A.1. Anticompetitive Price Effects for Acquired Brand Events Demonstrates Harm to Competition

75. I demonstrate that Varsity acquired event producers and then elevated the price of the acquired brand events above competitive levels by using evidence on the company's registration records for the events that it operated, including acquired brand events, and using the registration records of those previously independent companies prior to their acquisition by Varsity.[9] Those acquired brand events include events that were previously operated by Aloha Productions, All Things Cheer (ATC), Champion Spirit Group (CSG), EPIC Brands, JamBrands (JF), Mardi Gras Spirit (MGS), and Spirit Celebration (SCB).

76. Upon reading Dr. Murphy's report, I became aware of additional registration records for the companies All Things Cheer (ATC) and Spirit Celebration (SCB) for the seasons prior to Varsity acquiring these companies.[10] I updated my analysis to include this pre-acquisition information for ATC and SCB. The results of this updated analysis are described throughout this report.

77. I compare the registration fees for the same events before and after acquisition, specifically the final season of registration records prior to acquisition and the seasons after acquisition starting with the first season in which Varsity had pricing control. All prices, here and throughout this report, are inflation adjusted to 2018 dollars, and referred to throughout as "real prices."[11] The changes in real price are weighted by the athlete counts at each event. The reported real price changes have no composition effects since the real price changes are calculated at the event-level and then a Fisher ideal price index methodology is applied to determine the change in the index year-over-year (equivalently, a change in the weighted average of the real prices year-over-year). The real price changes represent changes over either one or two seasons. Since the purpose of this analysis is to calculate the difference

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[9] See Varsity Registration Data and Pre-Acquisition Data.
[10] See VAR00513660 (ATC) and both VAR00195096 and VAR00195098 (SCB).
[11] Murphy Report. Dr. Murphy discusses the issue of the inflation adjustment multiple times in his report. I have not separately replied to each instance of this critique.

between the pre-acquisition competitive benchmark and the post-acquisition Varsity price, the correct focus is the total change in real price, and not whether it was implemented in one-step or two-steps. A summary of the real price comparison evidence is provided below in Table 1.

Table 1. Varsity Increased Real Prices for Acquired Brand Events

Brand	Acquisition Date	From	To	Number of Events	Real Price Change
ALO	12/15/2016	2016-2017	2017-2018	15	12.2%
		2017-2018	2018-2019	11	-0.6%
		2018-2019	2019-2020	7	4.2%
ATC	4/21/2017	2016-2017	2017-2018	2	43.2%
		2017-2018	2018-2019	2	-2.0%
		2018-2019	2019-2020	2	11.5%
CSG	11/15/2017	2015-2016	2018-2019	7	52.0%
		2017-2018	2019-2020	5	-0.1%
EPIC	1/19/2018	2015-2016	2018-2019	51	15.1%
		2017-2018	2019-2020	23	4.7%
JF	11/2/2015	2013-2014	2016-2017	42	23.9%
		2015-2016	2017-2018	41	-1.7%
		2016-2017	2018-2019	40	-0.1%
		2017-2018	2019-2020	32	1.7%
MGS	12/1/2017	2017-2018	2018-2019	6	30.6%
		2018-2019	2019-2020	6	5.7%
SCB	2/28/2017	2016	2017-2018	9	46.9%
		2017-2018	2018-2019	9	1.7%
		2018-2019	2019-2020	7	-5.5%
All 7		**Prior to Acq.**	**Post Acq.**	**132**	**23.8%**

Sources: Varsity Registration Data; Pre-Acquisition Data.

Notes: The prices before and after acquisition are weighted by athlete count. Rows highlighted in blue indicate the first season post-acquisition in which Varsity had pricing control. The price changes are real price changes.

78. For example, as shown in Table 1 above, the price of Aloha brand events that Varsity acquired and continued to operate increased in real price by an average of 12% over a one-year period spanning the pre-acquisition and the first season of Varsity pricing control post-acquisition; Varsity increased the average real price for All Things Cheer brand events by 43% over one season; it increased the average real price for CSG brand events over two seasons by 52%; it increased the average real price increase for EPIC brand events by 15%

over two seasons; Varsity increased the average real price increase for JamBrands brand events by 24% over two seasons; it increased the average real price increase for Mardi Gras Spirit brand events by 31% over one season; and it increased the average real price for Spirit Celebration brand events by 47% over either one or two seasons.[12]

79. The final row in Table 1 above calculates the Fisher ideal price index for all seven acquired brands from the last available information pre-acquisition (prices set by the competitor) relative to the first year of Varsity pricing control (prices set by Varsity). The real price change equals 23.8%. The period between pre-acquisition and post-acquisition data spans one season, one-and-a-half seasons (for the case of SCB), or two seasons. The period length is not material for this analysis, as I make comparisons of real prices having corrected for inflation. Thus, a real price increase of 23.8% between the competitive benchmark and Varsity's supra-competitive price represents the same price differential even if, for some acquisitions, there is an intervening year of missing data between the pre-acquisition competitive level and Varsity's new, higher price. Table 35 through Table 50 report the price changes for all acquired brand events, including both events that Varsity acquired and continued to operate and events that Varsity acquired and immediately canceled. As shown in those tables, real prices increased for nearly all events, these price increases were significant and substantial for the largest acquired brand events, including acquired World Bids Events.

III.A.2. Anticompetitive Effects for World Bids Events Demonstrates Harm to Competition

80. World Bids Events are critical inputs in the cheer competitions markets for two reasons. First, they are the highest-attendance and highest-priced regular season events. Second, they are required for teams to compete at the Worlds championship. With acquisitions from 2004-2018, Varsity acquired fully 27 of the 33 World Bids Events that it owned at the end of the

[12] Varsity did not produce registration records for CSG brand events during the 2017-2018 season, did not produce registration records for EPIC brand events during the 2017-2018 season, did not produce registration records for JF brand events during the 2015-2016 seasons, and did not produce registration records for SCB brand events during the 2017 months of the 2016-2017 season. In all four instances, the missing registration records were during the season of acquisition. Regardless of whether revenues were collected by the rival companies before the acquisitions closed or by Varsity after the acquisitions closed, Varsity owns records (either its own records or the rival companies' records through the acquisitions) that report the revenues earned on such events. Yet such documents were not produced in this litigation.

2017-2018 season (see Table 33).[13] Varsity charged elevated prices for the World Bids Events relative to competitive levels. To estimate the real price effects from Varsity acquisitions on the World Bids Events, I compare the real prices for acquired brand World Bids Events before and after acquisition and find an average real price increase of 35% once Varsity obtains pricing control over these events (the analysis is the same as Table 1 above, but restricted to World Bids Events; see Table 35). Varsity's acquisitions of World Bid Events increased its market share of those events substantially. Varsity's event count market share of World Bids Events was only about 35% in the 2012-2013 season, but exceeded 75% at both the national level and at four of the five regional levels by the start of the 2018-2019 season (the event count market share for the Southwest region equaled 62.5% at the start of the 2018-2019 season; see Table 51 through Table 56).

81. Varsity's ability to dictate price increases in World Bids Events is indicative of its market power.[14]

82. The methodology that I used in the calculation of the event count market share of World Bids Events in my opening expert report compared event names from the Varsity registration database with the event names from the USASF database of World Bids Events. A second, improved methodology, which I implement in this report, consists of comparing the location (city and state) and competition dates from the Varsity registration database with the location (city and state) and competition dates from the USASF database of World Bids Events. This second methodology accommodates name changes, particular after Varsity acquires a World Bids Event.

83. Using this second methodology, I report below in Table 2 Varsity's event count market shares for World Bids Events. Table 51 through Table 56 report the event count market shares for World Bids Events by region. I use this methodology throughout this report when I refer to World Bid Event market shares.

[13] Cited tables can be found in the Appendix.

[14] See, e.g., the discussion of the Supreme Court decision in *U.S. v. E. I. du Pont de Nemours & Co*, at footnotes 34 and 35, and throughout, in: Krattenmaker, Lande, and Salop, Georgetown Law Journal Association, "Monopoly power and market power in antitrust law," published online by the US Department of Justice, at https://www.justice.gov/atr/monopoly-power-and-market-power-antitrust-law. "Monopoly power," synonymous with "market power," is defined as "the power to control prices or exclude competition." In *NCAA v. Board of Regents*, "market power" is defined as "the ability to raise prices above those that would be charged in a competitive market."

Table 2. Varsity's Event Count Market Share for World Bids Events, 2012-2013 Season Through 2019-2020 Season

Season	Varsity Events	Total Events	Varsity Event Share
2012-2013	12	34	35.3%
2013-2014	16	42	38.1%
2014-2015	18	42	42.9%
2015-2016	23	42	54.8%
2016-2017	23	42	54.8%
2017-2018	32	42	76.2%
2018-2019	33	42	78.6%
2019-2020	33	42	78.6%

Sources: Varsity Registration Data; World Bids Events Data.

84. Varsity's event count market shares for World Bids Events reported in Table 2 above are consistent with the company's own internal documents.[15]

III.A.3. Anticompetitive Effects for Regular Season Events Demonstrates Harm to Competition

85. Varsity's prices for regular season events other than World Bids Events were also elevated relative to competitive price levels. I implement a price overcharge analysis that compares the real prices for Varsity competitions to the real prices for a competitive benchmark consisting of rival event producers' competitions. This empirical analysis estimates Varsity's competition overcharge to be equal to 27.4%. Varsity's ability to charge elevated prices for regular season competitions is premised on its dominant market power, as demonstrated by the available market share evidence produced in this litigation. The available evidence reports Varsity's market share for All-Star regular season events in two ways. First, Varsity's event count market share for All-Star events, which equaled 56.2% at the end of the 2017-2018 season, is determined from the number of Varsity competitions to the number of USASF sanctioned competitions. Given differences in pricing and participant attendance, the corresponding revenue market share for All-Star events would be significantly higher than 56.2%. Second, Varsity's revenue market share for All-Star events is reported in Varsity's internal market research from September 2016.

[15] See VAR00080966; USASF_00015124 (Peterson Exhibit 33); VAR00310631, at -664; VAR00078751 (Elza Exhibit 15), at -761.

86. Dr. Murphy mischaracterizes my opinions related to Varsity's market share in the cheer competitions markets.[16] Based on a count of all All-Star cheer competitions in the United States, as determined by the number of USASF-sanctioned All-Star cheer competitions, I calculated that Varsity's event count market share equaled 56.2% at the end of the 2017-2018 season and 63.6% at the end of the 2018-2019 season.[17] This event count market share is calculated by counting the number of Varsity events and comparing to the number of USASF-sanctioned events.

87. I report below in Table 3 Varsity's event count market shares for All-Star events, based on the number of events that Varsity owned and operated each season relative to the total number of USASF-sanctioned events for that season. The number of events operated by Varsity in each season equals the number of events produced by companies that Varsity owned at the end of the season. For example, 8.4% of all All-Star events in the 2017-2018 season were EPIC brand events. Varsity acquired these events during that season (in January 2018), so the event count market share at the end of the 2017-2018 season reflects Varsity's ownership of the EPIC events (plus its ownership of its own legacy events and its ownership of other brand events that it acquired during that season).

[16] See Murphy Report, ¶ 227.
[17] Heeb Report, Tables 12 and 17.

Table 3. Varsity's Event Count Market Share of All-Star Events, 2015-2016 Season Through 2018-2019 Season

Season	Varsity Events Based on End of Season Ownership	USASF Sanctioned Events	Event Count Market Share of All-Star Events
2015-2016	343	809	42.4%
2016-2017	375	945	39.7%
2017-2018	467	831	56.2%
2018-2019	474	745	63.6%

Sources: Varsity Registration Data; USASF_00000297, at -297.

Notes: Varsity acquired JamBrands in November 2015, so all JamBrands brand events in the 2015-2016 season are included in Varsity's postseason market share of 42.4% in the 2015-2016 season. Varsity acquired Aloha in December 2016, Spirit Celebration (SCB) in February 2017, and All Things Cheer (ATC) in April 2017, so all Aloha/SCB/ATC brand events in the 2016-2017 season are included in Varsity's postseason market share of 39.7% in the 2016-2017 season. Varsity acquired Champion Spirit (CSG) in November 2017, Mardi Gras Spirit (MGS) in December 2017, and EPIC in January 2018, so all CSG/MGS/EPIC brand events in the 2017-2018 season are included in Varsity's postseason market share of 56.2% in the 2017-2018 season.

Varsity Registration Data does not contain registration records for JamBrands for the 2015-2016 season, for Aloha/SCB/ATC for the 2016-2017 season, and for CSG/EPIC for the 2017-2018 season (all seasons of acquisition). I estimate the number of events for these brands in each brand's season of acquisition from the number of events operated by Varsity under that brand in the following season. For example, the count of JamBrands events for 2015-2016 season is estimated by the number of JamBrands events in the 2016-2017 season. This estimation undercounts the number of acquired brand events in the season of acquisition, because Varsity eliminated many of the brand events that it acquired in its first season of pricing control but would have kept those events on the schedule during the season of acquisition. See Table 36.

88. Varsity's event count market share underreports its revenue market share for All-Star competitions for two reasons. First, Varsity's events had more participants than non-Varsity events. Second, Varsity's events were more expensive than non-Varsity events. Both facts lead me to conclude that Varsity's revenue market share for All-Star competitions significantly exceeded its event count market share of 56.2% at the end of the 2017-2018 season, and by a significant amount. As described in my opening report, a 56.2% event count market share increases to a revenue market share of 76.2% if Varsity events have twice as many participants and are priced 25% higher than competitors.

89. An internal market research document produced by Varsity reports its revenue share of the All-Star competition market and is dated September 2016 (prior to the acquisitions of EPIC, Aloha, Spirit Celebration, and Champion Spirit Group, but after the acquisitions of

JamBrands and Cheer Ltd.).[18] The internal analysis included an analysis of the revenues for Varsity, 20 other Tier 1 event producers, three Tier 2 event producers, 44 Tier 3 event producers, and 11 Tier 4 event producers.[19] Relying on the data in that internal market research document, Varsity's revenue market share as of September 2016 was 75%.[20] Adding together the revenues for Varsity as of September 2016 plus its subsequent acquisitions (EPIC, Aloha, Spirit Celebration, and Champion Spirit Group, all completed by January 2018) indicates that Varsity's revenue market share at the end of the 2017-2018 season was no smaller than 87.6%.[21]

90. The market research document was developed by Varsity and produced for this litigation. Despite criticizing Plaintiffs' experts for not "examining the assumptions (including the scope of the market considered) or data sources underlying those estimates," Dr. Murphy makes no attempt to correct the record as to the assumptions or the data sources. Dr. Murphy's fails to correct the record despite having access to Varsity employees (he conducted eight interviews with Varsity employees) and the ability to request further information.[22]

91. I report below in Table 4 Varsity's revenue market shares for All-Star events, based on the fixed revenue from the September 2016 market research document. The dates indicate the acquisition dates for each of the acquisitions Aloha, Spirit Celebration, All Things Cheer, Champion Spirit Group, Mardi Gras Spirit, and EPIC (in order of acquisition), since the market research document reported revenues for each of these six companies as of September 2016 (prior to acquisition). As of the EPIC acquisition in January 2018, Varsity's revenue market share based on the fixed revenues from September 2016 equaled 87.6%.

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[18] VAR00101102.
[19] VAR00101102, tab "Market Share" and tab "List of Companies."
[20] See VAR00101102.
[21] See VAR00101102.
[22] Murphy Report, ¶ 227.

Table 4. Varsity's Revenue Market Share of All-Star Events, Fixed at September 2016 Revenue Values and Including Acquisitions Through January 2018

All Star Event Companies	Revenue	% of Market
Varsity All Star Events	$ 103,420,000.00	75.2%
Varsity acquired GSSA/Aloha (12/15/2016)	$ 3,200,000.00	2.3%
Varsity All Star Events (as of 12/15/2016)	$ 106,620,000.00	77.5%
Varsity acquired Spirit Celebration (2/28/2017)	$ 2,200,000.00	1.6%
Varsity All Star Events (as of 2/28/2017)	$ 108,820,000.00	79.1%
Varsity acquired All Things Cheer (4/21/2017)	$ 650,000.00	0.5%
Varsity All Star Events (as of 4/21/2017)	$ 109,470,000.00	79.6%
Varsity acquired Champion Spirit Group (11/15/2017)	$ 2,500,000.00	1.8%
Varsity All Star Events (as of 11/15/2017)	$ 111,970,000.00	81.4%
Varsity acquired Mardi Gras Spirit (12/1/2017)	$ 550,000.00	0.4%
Varsity All Star Events (as of 12/1/2017)	$ 112,520,000.00	81.8%
Varsity acquired EPIC (1/19/2018)	$ 8,000,000.00	5.8%
Varsity All Star Events (as of 1/19/2018)	$ 120,520,000.00	87.6%

Sources: VAR00101102.

Notes: The table formatting and structure is identical to the original company market research document, which (according to its metadata) was last modified by Tres Letard on September 16, 2016. The table includes revenue from the "List of Companies" tab in: VAR00101102 for two companies: All Things Cheer and Mardi Gras Spirit.

III.A.4. Nearly All Varsity All-Star Competition Customers Attended an Acquired Brand Event or a World Bids Event

92. I implemented an empirical regression methodology that compared Varsity's real prices for competitions to a competitive benchmark and estimated Varsity's competition overcharge to be equal to 27%. However, without even considering the details of this econometric analysis, recall that I separately analyzed the price increases that Varsity imposed after acquiring rival events,

93. I show below that nearly all of Varsity's All-Star customers attended an acquired brand event and nearly all of Varsity's All-Star customers attended a World Bids Event. Thus, nearly all of Varsity's All-Star customers were harmed using direct evidence of the competitive effects for any of these event types and suffered continued antitrust injury by attending more than one of these types of events and more of these types of events overall.

94. The acquired brands that I consider are the seven acquisitions from Table 1 for which I have identified an anticompetitive increase in real prices: Aloha, All Things Cheer, CSG, EPIC, JamBrands, Mardi Gras Spirit, and Spirit Celebration. The World Bids Events include both

those acquired with a demonstrated real price increase (Aloha, All Things Cheer, CSG, EPIC, JamBrands, Mardi Gras Spirit, and Spirit Celebration), the remaining 13 World Bids Events that Varsity acquired from 2004-2014 without available registration data, and the 6 World Bids Events that were owned and operated by Varsity prior to 2004.

95. As show in Table 5 below, out of all of Varsity's customers at All-Star competitions, nearly all of them attended one of these two types of events during the Class Period: an acquired brand event or a World Bids Event.

Table 5. Varsity's All-Star Cheer Competition Customers Almost All Attended Acquired Brands Events or World Bids Events

Event Type Groups	Entrant Count in Class Period	Percentage of Total Entrants during Class Period	Registration Fees in Class Period	Percentage of Total Registration Fees during Class Period
Acquired Brands Events	1,554,424	93.9%	$262,929,342	94.1%
World Bids Events	1,528,525	92.4%	$265,045,172	94.8%
Acquired Brands or World Bids Events	1,632,346	98.7%	$276,763,039	99.0%

Sources: Varsity Registration Data; World Bids Events Data; Pre-Acquisition Data.

96. As shown in Table 5 above, customers that attended acquired brand events during the Class Period accounted for 94% of the entrants and 94% of the registration fees across all of Varsity's All-Star competition customers. Further, customers that attended World Bids Events during the Class Period accounted for 92% of the entrants and 95% of the registration fees across all of Varsity's All-Star competition customers. Since I established harm for each of these two types of events, a customer need only attend one type of event to suffer antitrust injury. Therefore, customers that attended either of these two types of events (acquired brand events or World Bids Events) accounted for 99% of the entrants and 99% of the registration fees across all of Varsity's All-Star competition customers. Thus, just based on the direct evidence of competitive harm for these two types of events, nearly all All-Star competitions customers have demonstrable antitrust injury.

III.B. At Most a *De Minimus* Fraction of Class Members are Uninjured

97. Dr. Murphy testifies that he has no opinion as to the fraction of Class Members that were

injured (or conversely uninjured) by Varsity's conduct.[23] Dr. Murphy testifies that, as a legal matter, no Class Members can suffer antitrust injury if he was unable to find any evidence of harm to competition.[24]

98. Dr. Murphy makes the assessment that there is no harm to competition in spite of the fact that Varsity increased the price of events that it acquired and continued to operate by 24%; that Varsity discontinued many acquired events, and initiated new events with an average price that was significantly higher than the discontinued events; and that Varsity maintained its own events at prices that were on average 27% above competitive benchmarks.[25] Dr. Murphy does not dispute that Varsity implemented these price increases, or that Varsity priced its own events higher than the events that I have identified as competitive benchmarks. Instead, he attributes his inability to detect any harm to competition from Varsity's substantially higher prices to the possibility that these supra-normal Varsity prices may be attributable to factors other than the alleged conduct. I have addressed these alternative explanations in Section V.D. and show that his explanations do not explain the Varsity overcharges.

99. This is the only basis for Dr. Murphy's claim that more than a *de minimis* fraction of Class Members are uninjured by the alleged anticompetitive conduct.[26] He has performed no other analysis to prove that any Class Members may have been unharmed, or to quantify their number. If the finder of fact should determine that the acknowledged Varsity price increases and price differences between Varsity products and the competitive benchmarks that I have identified may be attributable (at least in part) to the allegedly illegal anticompetitive

[23] Murphy Deposition, November 4, 2022, 246:15-247:14 ("I didn't count up the numbers." "I didn't put a specific percentage on it.").

[24] Murphy Deposition, November 4, 2022, 242:18-24 ("I haven't found evidence that there's been antitrust harm here. So if there's not antitrust harm, I'm not a lawyer, but my understanding is there's not antitrust harm, there wouldn't be antitrust injury. You need one to get the other.").

[25] Similar conclusions regarding injury from purchases of anticompetitively overpriced apparel and camp registration fees apply. My understanding is that for a Class Member to suffer antitrust injury, it is only necessary that some antitrust injury has been suffered, in some form, in at least one of the alleged product markets. It is not necessary that each Class Member suffer injury from each alleged element of anticompetitive conduct, or in each affected product market.

[26] Murphy Deposition, November 4, 2022, 246:15-247:14 ("[Dr. Heeb's] analysis would imply that people in a region were not injured, that would be a nontrivial fraction of the population."). First, my analysis would not imply that there are necessarily any uninjured class members in a region; only that there is an upper bound for the number of uninjured class members. The actual number of uninjured class members could be zero. Further, even if there are a few uninjured class members, I have shown that this number is necessarily very small, and reasonably would be described as *de minimus*.

conduct, then by Dr. Murphy's own criteria the Class Members that overpaid for those products will have suffered antitrust injury, and the number of unharmed Class Members will be *di minimis* by his criteria.

100. In my initial report, I calculated Varsity's effective market share of All-Star events for each local geographic region (CSA) in which Varsity operated a cheer competition. I previously identified the threshold market share as 40%, as any company with a market share of 40% or higher would be operating in a market classified by the DOJ/FTC as a "Moderately Concentrated Market."[27] My updated analysis considers a second, higher threshold market share of 50%, as any company with a market share of 50% or higher would be operating in a market classified by the DOJ/FTC as a "Highly Concentrated Market."[28] In a "Highly Concentrated Market," according to the DOJ/FTC, "an increase in the HHI of between 100 points and 200 points potentially raise significant competitive concerns and often warrant scrutiny" and "an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power."[29] Among the reasons that the DOJ/FTC presume that even small acquisitions in a "Highly Concentrated Market" are "presumed to be likely to enhance market power" is the ability of the monopolist in those markets to price discriminate, its ability to dictate prices (e.g., raising prices of acquired brand events above the levels that the previous owner was able to sustain), and its ability through price conduct and other restrictions, such as the restrictions in the conditional rebates program, to foreclosure competitors in the market.[30]

101. Based on this updated threshold informed by the DOJ/FTC Horizontal Merger Guidelines, I identify all Class Members that attended a Varsity competition in a CSA with an effective market share of 50% or greater as having suffered antitrust injury. If a Class Member attended a Varsity competition in a CSA with an effective market share below 50%, then I

[27] U.S. Department of Justice and Federal Trade Commission, "Horizontal Merger Guidelines," Issued: August 19, 2010, at §5.3. A company with a 40% market share contributes 1,600 ($40^2 = 1{,}600$) to the HHI of market concentration, meaning that even if the rest of the market were comprised of many smaller competitors, each with atomistic market shares, the HHI of market concentration would still exceed 1,600.

[28] Ibid. A company with a 50% market share contributes 2,500 ($50^2 = 2{,}500$) to the HHI of market concentration, meaning that even if the rest of the market were comprised of many smaller competitors, each with atomistic market shares, the HHI of market concentration would still exceed 2,500.

[29] Ibid. A company with a 50% market share that acquires a company with a 2% market share would lead to an increase in the HHI of market concentration of at least 200 points ($2 * 50 * 2 = 200$).

[30] Id., at §5 ("Market shares can directly influence firms' competitive incentives.").

was unable to conclude that Class Members suffered antitrust injury from such events.

III.B.1. Identifying Customers Specifically by Apparel Purchases and CSAs of Attended Events

102. As one additional update to my analysis from my first report, I conduct an analysis at the more granular customer-event level. I added up the total entrants in all CSAs with an effective market share less than 50%. I identify customers that did not purchase any Varsity apparel during the Class Period. Based on both pieces of evidence, I restrict attention to gyms that did not purchase Varsity apparel during the Class Period and count the number of entrants from those gyms at Varsity competitions in CSAs with implied market shares less than 50%. This count is a measure of the potential indirect purchasers not harmed by the alleged anticompetitive conduct. The count, relative to the total number of entrants at all Varsity competitions, establishes an upper bound on the percentage of Class Members that could be unharmed, because it treats each participant in an event (for the purposes of estimated the share of unharmed Class Members) as it were a unique Class Member, ignoring that the same teams of Class Members might attend multiple events in different CSAs, and hence a Class Member that was unharmed at one event might have been harmed at another.

103. Table 6 shows that this group of unharmed indirect purchasers comprises a tiny fraction of Class Members. Specifically, the only group of Class Members that could possibly be uninjured during the Class Period comprises only 2.32% of entrants, and only 1.30% (in terms of revenue) of all Class Members (as shown in Table 6 below).

Table 6. Fraction of Class Members in Cheer Competitions Markets that might be Uninjured by Varsity's Conduct

Region	Season	Entrants in Share < 50% CSAs and No Apparel	Total Entrants	Fraction of Entrants in Share < 50% CSAs and No Apparel	Fees Paid by Entrants in Share < 50% CSAs and No Apparel	Total Fees Paid	Fraction of Fees Paid by Entrants in Share < 50% CSAs and No Apparel
MW	2016-2017	4,712	96,811	4.87%	$435,858	$10,604,187	4.11%
	2017-2018	5,002	96,029	5.21%	$387,488	$10,268,519	3.77%
	2018-2019	1,785	102,956	1.73%	$146,193	$11,293,197	1.29%
	2019-2020	1,053	77,579	1.36%	$88,351	$9,074,036	0.97%
NE	2016-2017	1,157	78,312	1.48%	$85,636	$8,498,829	1.01%
	2017-2018	626	91,992	0.68%	$45,703	$9,886,498	0.46%
	2018-2019	2,117	122,631	1.73%	$142,650	$12,757,020	1.12%
	2019-2020	803	74,613	1.08%	$54,002	$8,193,635	0.66%
SE	2016-2017	3,354	187,438	1.79%	$221,410	$48,531,230	0.46%
	2017-2018	2,478	199,816	1.24%	$170,961	$54,800,116	0.31%
	2018-2019	2,608	219,562	1.19%	$173,862	$59,962,810	0.29%
	2019-2020	2,004	125,682	1.59%	$150,951	$16,466,729	0.92%
SW	2016-2017	6,546	85,069	7.69%	$642,573	$9,102,353	7.06%
	2017-2018	1,578	102,830	1.53%	$150,446	$11,097,032	1.36%
	2018-2019	3,495	102,700	3.40%	$364,668	$11,616,861	3.14%
	2019-2020	1,762	81,483	2.16%	$188,638	$9,784,039	1.93%
W	2016-2017	5,781	75,714	7.64%	$580,170	$7,719,965	7.52%
	2017-2018	1,545	89,226	1.73%	$178,662	$9,502,125	1.88%
	2018-2019	691	89,880	0.77%	$69,404	$9,587,671	0.72%
	2019-2020	983	62,097	1.58%	$80,499	$6,593,125	1.22%
All Regions	**Class Period**	**50,080**	**2,162,420**	**2.32%**	**$4,358,123**	**$335,339,977**	**1.30%**

Sources: Varsity Registration Data; CSA/MSA Information and Populations.

104. Thus, at most a *de minimus* share of Class Members were uninjured by Varsity's conduct according to this first refinement of my calculation of antitrust injury at customer-event level granularity. Most importantly, these Class Members can be identified using these criteria and separated from the remainder of the Class.

III.B.2. Identifying Customers that Attended Events in Multiple CSAs

105. As I second refinement, I continue to implement my calculation of antitrust injury at the granularity of the customer-event level. However, at the level of the individual customer, I identify all CSAs in which the customer attended Varsity competitions during a particular season. I have previously calculated the effective Varsity market shares for all CSAs in that season. If a customer attended a Varsity competition in a CSA with an effective Varsity market share less than 50% and attended a different Varsity competition in a CSA with an

effective Varsity market share greater than or equal to 50%, I identify such a customer as suffering antitrust injury during that competition season. The customer was injured from attending a Varsity competition in a CSA with an effective Varsity market share greater than or equal to 50%, and this suffices to establish antitrust injury for that customer in that season, independent of the location of other Varsity events attended. I then associate the harmed customer with the harmed Class Members, so that the Class Member is considered harmed if its gym attended any event in a CSA with an implied Varsity market share greater than 50% or made purchases of Varsity apparel. This measure is a more accurate estimate of possible unharmed Class Members, since it accounts for that fact that harm from at least one event in a CSA with implied Varsity market share above 50% establishes an antitrust injury, even if other events were attended where Varsity's market share was lower. However, this estimate, while more accurate, is not an upper bound, because it implicitly assumes that all Class Members at a gym attend the same events.

106. I continue to evaluate customers based on whether they purchased Varsity apparel during the Class Period.

107. Table 7 shows that the group of Class Members not included in the injured class comprises a tiny fraction of the overall set of Class Members. Specifically, the only group of Class Members that could possibly be uninjured during the Class Period comprises only 0.57% of entrants, and only 0.32% (in terms of revenue) of all Class Members (as shown in Table 7 below).

Table 7. Fraction of Class Members in Cheer Competitions Markets that are Uninjured by Varsity's Conduct (Accounting for Entrants in Multiple CSAs)

Region	Season	Entrants in Share < 50% CSAs and No Apparel	Total Entrants	Fraction of Entrants in Share < 50% CSAs and No Apparel	Fees Paid by Entrants in Share < 50% CSAs and No Apparel	Total Fees Paid	Fraction of Fees Paid by Entrants in Share < 50% CSAs and No Apparel
MW	2016-2017	1,218	96,811	1.26%	$106,619	$10,604,187	1.01%
	2017-2018	957	96,029	1.00%	$79,978	$10,268,519	0.78%
	2018-2019	215	102,956	0.21%	$15,647	$11,293,197	0.14%
	2019-2020	134	77,579	0.17%	$10,205	$9,074,036	0.11%
NE	2016-2017	231	78,312	0.29%	$19,141	$8,498,829	0.23%
	2017-2018	0	91,992	0.00%	$0	$9,886,498	0.00%
	2018-2019	84	122,631	0.07%	$5,996	$12,757,020	0.05%
	2019-2020	150	74,613	0.20%	$9,302	$8,193,635	0.11%
SE	2016-2017	562	187,438	0.30%	$27,477	$48,531,230	0.06%
	2017-2018	311	199,816	0.16%	$17,487	$54,800,116	0.03%
	2018-2019	159	219,562	0.07%	$7,401	$59,962,810	0.01%
	2019-2020	726	125,682	0.58%	$106,272	$16,466,729	0.65%
SW	2016-2017	3,769	85,069	4.43%	$326,337	$9,102,353	3.59%
	2017-2018	276	102,830	0.27%	$28,450	$11,097,032	0.26%
	2018-2019	253	102,700	0.25%	$30,919	$11,616,861	0.27%
	2019-2020	345	81,483	0.42%	$36,705	$9,784,039	0.38%
W	2016-2017	2,242	75,714	2.96%	$204,714	$7,719,965	2.65%
	2017-2018	198	89,226	0.22%	$21,567	$9,502,125	0.23%
	2018-2019	39	89,880	0.04%	$2,458	$9,587,671	0.03%
	2019-2020	409	62,097	0.66%	$29,185	$6,593,125	0.44%
All Regions	**Class Period**	**12,278**	**2,162,420**	**0.57%**	**$1,085,859**	**$335,339,977**	**0.32%**

Sources: Varsity Registration Data; CSA/MSA Information and Populations.

108. Thus, at most a *de minimus* share of Class Members were uninjured by Varsity's conduct according to this second refinement of my calculation of antitrust injury at customer-event level granularity. Most importantly, these Class Members can be identified using these criteria and separated from the remainder of the Class.

IV. MARKET DEFINITION AND MARKET POWER

IV.A. The Relevant Product and Geographic Markets that I Defined in My June Report Are Supported by the Evidence and Economic Principles

109. As I stated in my first report, the purpose of evaluating relevant product and geographic market definition is to determine the competitive impact of Varsity's alleged anticompetitive

conduct.[31] My analysis focuses on the application of the HMT to determine whether a hypothetical monopolist would find it profitable to impose at least a small but significant and non-transitory increase in price (SSNIP). I also conducted analyses of Varsity prices relative to competitive benchmarks for competitions and apparel as evidence of market power, since the ability to set such prices is itself evidence of the exercise of market power.

110. In addition to quantitative analysis and an application of the HMT, economists may also consider the *Brown Shoe* indicia when defining relevant product markets and relevant geographic markets for the purposes of antitrust litigation.[32] In my first report, I refer to the *Brown Shoe* indicia in opining: "Other evidence that may be relevant to the market definition exercise for economists include contemporaneous documents detailing competition among products, such as win-loss data, strategy and product market positioning documents, marketing materials, and other sales information. Those so-called 'practical indicia' of the reasonableness of substitution as articulated by the district court in *Brown Shoe* are: (1) industry or public recognition of separate markets; (2) the products' characteristics and uses; (3) unique production facilities; (4) distinct customers; (5) distinct prices; (6) sensitivity to price changes; and (7) specialized vendors."[33]

111. Dr. Murphy offers several criticisms of the relevant product and geographic markets that I define for my opinions, but he fails to state how any alternative definitions of the relevant product and geographic markets would change any conclusions of the anticompetitive conduct and effects. He takes issue, in various ways and to various degrees, with my following opinions:

- All-Star and school cheer competitions are in the same relevant product market.
- The relevant geographic markets for cheer camps and cheer competitions are regional, and multiple alternative particular boundaries may be equally valid. I have identified the five USASF regions used by USASF to organize its operations as the regional boundaries. These boundaries qualify under the SSNIP test as proper antitrust markets.

[31] Heeb Report, ¶ 138.
[32] Brown Shoe Co. v. U.S., 370 U.S. 294 (1962).
[33] Heeb Report, ¶ 109 and note 100. These practical indicia are often referred to as the "Brown Shoe" factors based on Brown Shoe Co. v. U.S., 370 U.S. 294 (1962).

- The cheer apparel market includes all categories of apparel used by athletes in cheer competitions, including uniforms, lettering, shoes, warmups, camp wear, and accessories.

112. The relevant product market for cheer competitions is confirmed by a direct application of the HMT. Specifically, I demonstrate a Varsity overcharge of 27% for its competitions (relative to the competitive benchmark) directly shows that a hypothetical monopolist can profitably implement a price change of at least 10% above competitive levels without a significant loss of customers sufficient to defeat the price increase. Dr. Murphy claims that All-Star competitions and school competitions are in separate relevant product markets. The *Brown Shoe* Court defined relevant product markets for men's shoes, women's shoes, and children's shoes, and found that further stratification would be "impractical, unwarranted and unrealistic."[34] Notably, the Brown Shoe Court stated that "within this broad market, well-defined submarkets may exist which, in themselves, constitute product markets for antitrust purposes."[35]
113. The *Brown Shoe* Court further writes that "the areas of effective competition for retailing purposes cannot be fixed with mathematical precision."[36] This suggests flexibility in market definition for fact-dependent antitrust inquiry.
114. Since *Brown Shoe*, economists have made strides in identifying market power, when data appropriate for those techniques are available, that have been incorporated into the *DOJ/FTC Horizontal Merger Guidelines*. However, in most cases a full antitrust inquiry should include consideration of the *Brown Shoe* indicia as I have done in this case. In the areas where Dr. Murphy has disagreed with the relevant market laid out in my analyses, consideration of the *Brown Shoe* indicia, where applicable, suggests that my market definitions remain valid and consistent.
115. Application of the *Brown Shoe* indicia supports my opinion that All-Star competitions and school competitions are in the same relevant product market. The evidence shows that there is industry and public recognition that All-Star competitions and school competitions are in

[34] Brown Shoe Co. v. U.S., 370 U.S. 298 (1962).
[35] Brown Shoe Co. v. U.S., 370 U.S. 294, 325 (1962), citing U.S. v. E. I. du Pont de Nemours & Co., 353 U.S. 586, 593-595 (1956).
[36] Brown Shoe Co. v. U.S., 370 US 325 (1962), citing U.S. v. E. I. du Pont de Nemours & Co., 353 U.S. 586, 593-595 (1956).

the same product market (***Indicium 1***). For example, Varsity's marketing director Jackie Kennedy's testified in her deposition that All-Star teams and school teams use the same Varsity registration portal, and that Varsity had the same marketing department for both segments.[37]

116. Further, the evidence on registrations at Varsity competitions shows that there is substantial overlap in the venues (***Indicium 3***) and customers (***Indicium 4***) between All-Star teams and school teams. First, as shown in Table 8 below, a significant number of school teams attended All-Star competitions alongside All-Star teams. These competitions took place on the exact same dates and at the exact same venues. Specifically, between 55%-60% of all school entrants in Varsity competitions attended competitions at which All-Star teams also competed (see Table 8 below). This represents a significant overlap in venues (***Indicium 3***) and customers (***Indicium 4***). In terms of the number of events, between 65%-75% of all Varsity competitions with school entrants are competitions at which All-Star teams also competed (see Table 8 below).

Table 8. School Teams and All-Star Teams Attended the Same Competitions at the Same Venues and Paid the Same Prices

Season	Competitions for only school teams	Competitions for both All-Star and school teams	Percentage of school competitions that are joint with school and All-Star teams	School entrants at competitions for only school teams	School entrants at competitions for both All-Star and school teams	Percentage of school entrants at All-Star and school joint competitions
2015-2016	32	98	75.4%	35,395	52,934	59.9%
2016-2017	35	91	72.2%	36,544	46,646	56.1%
2017-2018	37	83	69.2%	37,800	55,561	59.5%
2018-2019	39	79	66.9%	42,055	56,212	57.2%

Sources: Varsity Registration Data.

117. Application of the *Brown Shoe* indicia supports my opinion that there is a single relevant product market for the different categories of apparel used by athletes at cheer competitions, including uniforms, lettering, shoes, warmups, camp wear, and accessories.

118. First, the products in the cheer apparel market are products used by cheer athletes in cheer competitions (***Indicia 2 and 4***). Second, the underlying inquiry under the *Brown Shoe* framework (including ***Indicium 6***) is to evaluate the degree to which customers are more

[37] Deposition of Jackie Kennedy, March 16, 2022, 303:22-305:10.

likely to substitute to other products in the market and less likely to substitute to products outside the market. Based on the empirical evidence that cheer athletes purchase their cheer competition apparel in a bundle, and often from the same provider, subject to an overall budget constraint for apparel and competitions in a competition season, then the relevant economic trade-offs of customers in the cheer apparel market are such that they are very likely to substitute between products in the market, e.g., a less-expensive uniform allows for more-expensive shoes under the budget constraint.

119. Across the six categories of cheer apparel identified by Varsity to organize its sales operations (uniforms, lettering, shoes, warmups, camp wear, and accessories), more than 70% of Varsity revenue is from customers who purchase from at least five of the six cheer apparel categories, and more than 96% of revenue is from customers who purchase at least three categories of apparel.[38] The three categories generating the most apparel revenue for Varsity are uniforms, lettering, and shoes, which combined generate more than 78% of Varsity's total apparel revenue across the six categories.[39] Of customers that purchase from at least three categories of apparel, 98% purchase uniforms, 99% purchase lettering, and 86% purchase shoes.[40] If a customer purchases in only one category, it is likely to purchase either uniforms (51% of the one-category purchases) or shoes (33% of the one-category purchases).[41] But such one-category purchases of uniforms account for only 0.6% of total revenues from uniforms and one-category purchases of shoes account for only 1.1% of total revenues from shoes.[42] Thus, customer bundling across cheer apparel categories is ubiquitous in Varsity's apparel sales data.

120. My other principal disagreement with Dr. Murphy regarding market definition is the relevant geographical market for cheer competitions and cheer camps. Dr. Murphy claims that I have

[38] Heeb Report, Table 6 (the fraction of revenue for customers purchasing in 5 or 6 categories equals 42.2% (5 categories) + 28.2% (6 categories) = 70.4%; the fraction of customers purchasing in 3, 4, 5, or 6 categories equals 8.4% (3 categories) + 17.6% (4 categories) + 42.2% (5 categories) + 28.2% (6 categories) = 96.5%).

[39] Heeb Report, Table 6 (the fraction of revenue from uniforms equals 45.5%, the fraction of revenue from lettering equals 17.3%, and the fraction of revenue from shoes equals 15.4%, for a total of 78.2%).

[40] Heeb Report, Tables 6 and 7.

[41] Heeb Report, Table 6 (customers purchasing in only one category purchased $1,658,378 in uniform and $1,057,049 in shoes out of a total of $3,234,786 across all six categories, which equals 51.3% for uniforms of the total and 32.7% for shoes, respectively).

[42] Heeb Report, Table 6.

concluded that geographic market definition is irrelevant. This is inaccurate.[43] Dr. Murphy similarly states, also incorrectly, that I "impos[e] a national market definition on the analysis."[44] I very clearly and repeatedly state that the geographic market for cheer competitions and cheer camps is regional: "these are regional antitrust markets largely because of potential travel cost considerations."[45]

121. This confusion arises because Varsity's anticompetitive conduct is in many respects national in scope, and as an empirical matter, the impact of Varsity's conduct results in a similar elevation of prices in all the regional markets. Dr. Murphy agrees with me that "whether markets are local, regional, or national" is important, and that it is important to analyze how widespread are the effects of the alleged anticompetitive behavior.[46] Nonetheless, Dr. Murphy does not undertake to define the market himself, or to empirically examine more local candidate markets than the regional markets that I have examined.

122. Dr. Murphy did not test his conjecture that the markets are local. In contrast, I have conducted empirical analysis showing that the markets are much larger even than regional CSAs, which are themselves consolidated groupings of local municipal areas (see Table 9 and Table 10 for my analysis of customer substitution patterns for cheer camps and Table 11 and Table 12 for my analysis of customer substitution patterns for cheer competitions).

123. Dr. Murphy mischaracterizes my analysis, which shows that Varsity's anticompetitive conduct has had a similar effect on competition pricing in each of the regional markets that I defined. This is not an imposition of a national geographic market, as Dr. Murphy claims.[47] On the contrary, I make an empirical observation, that the separate and well-defined regional markets exhibit similar price premiums imposed and maintained by Varsity, relative to competitive benchmarks. These regional pricing premiums, the regional monopoly overcharges percentages, are sufficiently similar across regions that, in my opinion, it is statistically and economically appropriate to assess a common overcharge across all regions,

[43] Murphy Report, ¶ 202. I discuss Dr. Murphy's misunderstanding of my use of the word irrelevant in the context of market definition at ¶ 202.
[44] Murphy Report, ¶ 202. I explain Dr. Murphy's misunderstanding of my use of the word irrelevant in the context of market definition at ¶ 202.
[45] Heeb Report, ¶ 19. The regional market definition for cheer competitions and camps is repeated throughout the report. Also see Heeb Report, ¶¶ 21, 42, 45, 112, 140, and 152.
[46] Murphy Report, ¶ 202.
[47] Murphy Report, ¶ 201.

that is to say, at a national level.[48]

124. The scholarly literature on the use of market definition in the context of antitrust analysis supports my opinion that the existence of regional markets does not preclude an estimate of national-level average overcharges that accurately reflects the underlying overcharges in the regional markets.[49]

125. The analysis I discussed in my first report to support my product and geographic market definitions is based on the Hypothetical Monopolist Test relied upon by the U.S. Department of Justice and the U.S. Federal Trade Commission for defining markets in the context of a merger review. [50] I have extended the analyses I did in my first report by showing the travel patterns to attend events outside a CSA region, which confirms that participants are willing to travel extensively within their region but outside of their local communities to attend cheer competitions and cheer camps (see Table 9 and Table 10 for my analysis of customer substitution patterns for cheer camps and Table 11 and Table 12 for my analysis of customer substitution patterns for cheer competitions).

126. I have examined Varsity's market share at the level of CSA regions (regional geographies that are smaller than the five regional product markets) and determined that Varsity's market power is nearly ubiquitous throughout smaller geographic areas within each of the five regional markets. Specifically, Varsity's market share is so large as to indicate a presumption of market power ("highly concentrated markets") in almost all CSA-level regions (see Table 6 and Table 7), and so large as to potentially indicate significant competitive concerns ("moderately concentrated markets") in almost all of the remaining areas. This addresses any concern that the assessment of the pricing impacts of Varsity's conduct at the regional or

[48] Separately from his arguments about market definition, Dr. Murphy has criticized my econometric calculations. I have taken account of his criticisms, and I have shown that even accounting for those arguments, my opinions regarding the magnitude and statistical significance of my overcharge estimates remain unchanged, and I show that a common national level overcharge is appropriate. However, should the Court prefer separate overcharge estimates by region, I have provided those in the Appendix.

[49] See Jonathan Baker, "Stepping out in an Old Brown Shoe: In Qualified Praise of Submarkets," Antitrust Law Journal, (2000). Vol 68. p. 207. Antitrust analysis may "identify a violation of the antitrust laws based on the harmful effects in any market, even one that is not the smallest. Doing so does not undermine the economic point of market definition if all such markets, whether broad or narrow, are defined with reference to substitution possibilities […]", citing "Olin Corp. v. FTC, 986 F.2d 1295, 1301 (9th Cir. 1993) (existence of a narrow relevant product market does not preclude a finding of violation in a broader market that encompasses the narrow market)."

[50] U.S. Department of Justine and Federal Trade Commission, "Horizontal Merger Guidelines," Issued: August 19, 2010, at §4.1.1.

national levels might have swept in smaller areas in which Varsity does not have market power. Similarly, I have shown that the price impacts of Varsity's conduct are similar in each of the regional markets, such that a common national level overcharge is appropriate, and that these estimates can be reliably obtained for the Class from common evidence (see Table 26).[51]

127. As I opined in my first report, "[a]lthough [*Brown Shoe* and the Hypothetical Monopolist Test] definitions differ, in principle, the relevant concepts are similar."[52] The evidence of customer substitution patterns as previously described, specifically that customers rarely travel outside of their home region for competitions and camps and yet almost always travel outside their home CSA for such events, is the essential factor for market definitions under both the HMT and the *Brown Shoe* indicia.

128. In the following sections, I address each one of the various market definition issues raised by Dr. Murphy.

IV.A.1. All-Star and School Cheer Competitions are in the Same Relevant Product Market

129. Dr. Murphy writes, "[b]oth Dr. Heeb and Dr. Netz acknowledge the significant differences between All Star cheer and scholastic cheer."[53]

130. Dr. Murphy mischaracterizes the opinions that I offered in my first report in which I wrote of All-Star cheer and school cheer, "[w]ithin competitive cheer, there are two disciplines: (1) All-Star cheer, in which teams are affiliated with private gyms (about 25-30% of competitive cheer teams); and (2) school cheer (about 60-75% of competitive cheer teams), in which teams are affiliated with middle schools, high schools, or colleges. All-Star cheer and school cheer are effectively the same activity, involving judged team performances, typically about 2½ minutes in length set to music, in an event forum where cheer routines are the main attraction. Teams compete against each other and are judged on their routines. The activity for both All-Star gyms and schools is the same, they are just run by different sponsors, either All-Star gyms or schools."[54] I have pointed out the significant differences between traditional

[51] Should the Court determine that region-specific competition overcharge estimates are appropriate, I have provided those estimates in the Appendix.
[52] Heeb Report, ¶ 107, note 96.
[53] Murphy Report, ¶ 149 (internal citations omitted).
[54] Heeb Report, ¶ 127 (internal citations omitted).

sideline cheer and competitive cheer and contrasted those with the substantially identical activities engaged in by school-sponsored competitive cheer teams and All-Star cheer teams.

131. Further, Dr. Murphy ignores the significant similarities between All-Star cheer teams (consisting of athletes from All-Star gyms) and school cheer teams (consisting of athletes from schools). Varsity's Vice President of Marketing and Communications, Jackie Kennedy, described such similarities in her deposition testimony: "some of the similarities are around the athleticism, and some of the skills"[55]; "the athleticism portion, where there are jumps, stunts, tumbling, or a dance, those would be comparable";[56] both All Star cheer teams and school cheer teams "have the option to [purchase apparel]";[57] "it's the same registration system" for All Star cheer teams and school cheer teams to register for Varsity events;[58] the same marketing department covered by All Star cheer and school cheer;[59] and Varsity TV broadcast content for both All Star cheer and school cheer.[60]

132. In another critique of my first report, Dr. Murphy writes, "Neither Dr. Heeb nor Dr. Netz provide any support for their conclusion that a regular-season All Star cheer competition in Oklahoma City, for example, is a substitute for a season-ending scholastic cheer competition like the UCA NHSCC in Orlando, Florida."[61] Again, Dr. Murphy mischaracterizes my opinions. Dr. Murphy's implied suggestion that there must be one-to-one substitution between a particular All-Star competition and a particular school sponsored cheer competition is a *non sequitur*. All-Star and school sponsored competitive cheer are in the same market because participants can and do choose to participate in one or the other of these two activities. This is a mutually exclusive choice, made by each participant at the beginning of each season. Participants and parents consider the total cost of participating when choosing which of these alternative activities to commit to for the season. As I discuss in my first report, substitution between these choices is considered by Varsity in setting its prices as such prices factor into the total cost of participating in either activity.[62]

133. Dr. Murphy also confuses the issue of which products are in the market by suggesting that

[55] Deposition of Jackie Kennedy, March 16, 2022, 302:12-14.
[56] Id., 302:19-21.
[57] Id., 303:10-13.
[58] Id., 303:22-304:5.
[59] Id., 305:10-16.
[60] Id., 305:21-25.
[61] Murphy Report, ¶ 150 (internal citations omitted).
[62] Heeb Report, ¶ 135.

for regular season events and postseason events to be in the same antitrust market, gyms and schools must necessarily consider every individual regular season event and every individual postseason event as one-to-one substitutes for one another.[63] This need not be the case. Nonetheless, some schools and gyms may consider a choice between an extra regular-season event and a postseason event. Some may consider choosing fewer or less expensive regular season events to accommodate more expensive postseason choices. Some may travel more and others travel less to attend events, and all of them will consider trade-offs across all their choices in order to construct a slate of events for their teams to attend, including an appropriate mix of regular-season and postseason events, given the makeup and preferences of their customers, the Class Members. All those events compete for their share of the budgets of the schools and gyms in their regions. In my econometric analysis of the Varsity monopoly overcharges, those postseason events are incorporated within their respective regions for regional events.[64]

134. The national-level postseason events similarly compete directly with other prestigious postseason events, and indirectly with all the other regular and postseason events that gyms and schools could alternatively trade-off to make an attractive offering to their customers.

135. Finally, in another critique regarding the geographical separation between events, Dr. Murphy claims that "Neither Dr. Heeb nor Dr. Netz provide any support for their conclusion that a […] competition in Oklahoma City, for example," is a substitute for a competition in Orlando, Florida.[65] First, Oklahoma City is in the Southwest regional market, and Orlando is in the Southeast region. Apparently, Dr. Murphy has misunderstood or mischaracterized my opinion. Because they are in separate regional markets, I do not offer an opinion that they compete directly with each other. I have discussed the regional market definition extensively in my first report.[66]

136. Second, in my first report I also performed a quantitative analysis of common impact at the level of a CSA, which is a localized geographic area larger than an MSA.[67] I have updated and extended that analysis in this report to examine the fractions of participants in Varsity

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[63] Murphy Report, ¶ 150.
[64] Heeb Report, Figure 4.
[65] Murphy Report, ¶ 150 (internal citations omitted).
[66] Heeb Report, ¶¶ 139-140.
[67] Heeb Report, ¶¶ 141-144; ¶¶ 313-316; ¶¶ 327-331; Table 27. CSAs are collections of two or more neighboring MSAs, except in isolated areas in which the CSA coincides with the MSA.

events in each CSA that have traveled from a different CSA. Based on this empirical evidence (see Table 12), I conclude that customers frequently travel outside of their home CSA for competitions.

137. While I do not claim that events in Oklahoma City compete directly with events in Orlando, there is some substantial overlap in the customers that choose to attend Oklahoma City event and Orlando event. There are 27 All-Star gyms that compete at events in both cities. In addition, there is significant overlap between these two groups of customers at competitions in other locations. For example, customers that attended events an Oklahoma City competition also competed in events in 36 other CSAs in which customers from an Orlando competition also competed. This includes Dallas where the overlap with Oklahoma City is 58 All-Star gyms and the overlap with Orlando is 628 All-Star gyms.[68]

138. Dr. Murphy's testimony agrees with my position that it is difficult to identify precise boundaries between relevant geographic markets.[69] As I stated this point in my first report, multiple alternative regional markets would qualify as antitrust markets.[70] These alternative market definitions may draw the boundaries in different places. The important thing for the antitrust analysis is not precisely where the boundaries are drawn, but rather that they are drawn in a way which ensures that there are similar competitive conditions within each region. Fortunately, in this case that is readily accomplished. My analysis of the degree of market concentration represented by Varsity's market share is high throughout each of regions, with very few customers located in CSAs in which Varsity does not, by itself, represent so high a concentration of market share as to result in a presumption of market power.

139. The *Brown Shoe* practical indicia include the degree of overlap in customers consuming the alternative products. My analysis of the CSA-level overlap shows that there is substantial degree of overlap across customers even between events at distant CSAs, such as Dr. Murphy's Oklahoma City and Orlando example. That analysis also shows that large shares of cheer competitors routinely travel outside their CSAs to attend events. Thus, the markets are not local, but are much bigger than local municipalities. In other words, the markets are

[68] Varsity Registration Data.
[69] Murphy Deposition, November 4, 2022, 134:5-135:8 ("Because the problem we have when you try to cut it like – up into this slice and this slice, what do you do with the guys who are on the borders between the two slices?").
[70] Heeb Report, ¶ 19.

regional. The boundaries of these markets cannot be precisely and uniquely determined, because just as Dr. Murphy testified, as one moves further from the center of any region, many customers from the center of that region may reach the limit of their willingness to travel, whereas there are others who started close to the boundary who may be willing to travel still further. In this circumstance, the practical indicia represented the geographic regions used in the ordinary course of business are an appropriate boundary. In addition, my analysis of the CSA level measures of Varsity market power as proxied by Varsity's market share demonstrates that such a regional market boundary does not sweep in more than a very few customers from localities where Varsity does not have substantial market power.

140. In contrast, Dr. Murphy has not undertaken to define the appropriate geographical market, or to conduct a hypothetical monopolist analysis, or analyze the *Brown Shoe* indicia.[71]

IV.A.2. Regular Season All-Star Competitions and Postseason All-Star Competitions are in the Same Relevant Product Market

141. Dr. Murphy states, "Neither Dr. Heeb nor Dr. Netz consider any of the significant differences among the various types of cheer competitions that I discussed in Section IV.E. Instead, their product market analysis considers only whether (in their opinion) All Star cheer is substitutable with scholastic cheer and with other activities such as gymnastics."[72]

142. As stated above, Dr. Murphy mischaracterizes the opinions that I offered in my first report in which I wrote of All-Star cheer and school cheer, "[w]ithin competitive cheer, there are two disciplines: (1) All-Star cheer, in which teams are affiliated with private gyms (about 25-30% of competitive cheer teams); and (2) school cheer (about 60-75% of competitive cheer teams), in which teams are affiliated with middle schools, high schools, or colleges. All-Star cheer and school cheer are effectively the same activity, involving judged team performances, typically about 2½ minutes in length set to music, in an event forum where cheer routines are the main attraction. Teams compete against each other and are judged on their routines. The primary distinction is not the activity itself, but the sponsor of the team,

[71] Dr. Murphy's testified that the HMT is one method to define markets for the purposes of antitrust litigation, but he offers no other methods for defining such markets. See Murphy Deposition, November 4, 2022, 103:13-104:1. Separately, he testified that "I did not do the hypothetical monopolist test," but he identifies no other methodology that he applied to define markets. See Murphy Deposition, November 4, 2022, 105:18-24. Specifically, he nowhere applied or cited to the *Brown Shoe* indicia. See Heeb Report, ¶ 107, note 96; ¶ 109, note 100.

[72] Murphy Report, ¶ 151 (internal citations omitted).

either All-Star gyms or schools."[73]

IV.A.3. Regular Season School Competitions and Postseason School Competitions are in the Same Relevant Product Market

143. Dr. Murphy states, "it is my conclusion that All Star events and scholastic events do not belong in the same markets for the purposes of antitrust analysis, and furthermore, end-of-season All Star events do not belong in the same market(s) as regular-season All Star competitions, nor do end-of-season scholastic events belong in the same market as regional scholastic competitions."[74]

144. Dr. Murphy's testifies that "[t]hings don't have to be identical to be in the same market."[75] Ultimately, Dr. Murphy does not offer affirmative opinions that define relevant product markets.[76] With respect to geographic markets, to the extent that Dr. Murphy's discussion of the 60% catchment threshold for 2-day events (which reasonable correspond to 250-mile radius circles around event locations) amounts to an affirmative definition of the markets, I have analyzed those regions empirically. I describe my analysis and conclusions in Figure 1. The conclusion of that analysis is that Varsity's degree of presumptive market power, as measured by its high estimated market shares, is nearly ubiquitous across the regions and in the populated portions of the country in which Varsity holds events.

145. Without a precise and complete affirmative opinion, it is not possible to know whether Dr. Murphy's opinions on this issue are consistent or reliable. As I describe in my first report, the facts that I evaluated form the basis for my opinion that All-Star competitions and school competitions belong in the same relevant product market, that regular-season and postseason competitions belong in the same relevant product market.[77]

IV.A.4. The Fact that Varsity Customers Attend Non-Varsity Competitions Does Not Disprove My Relevant Product Market Definition

146. Dr. Murphy states, "[t]he wide variation in the number of Varsity regular-season competitions attended by its All Star gym customers provides further evidence that many

[73] Heeb Report, ¶ 127 (internal citations omitted).
[74] Murphy Report, ¶ 162 (internal citations omitted).
[75] Murphy Deposition, November 4, 2022, 115:12-23 ("things don't have to be identical to be in the same market.").
[76] Murphy Deposition, November 4, 2022, 105:18-24 ("I did not do the hypothetical monopolist test").
[77] Heeb Report, ¶¶ 127-135.

Varsity All Star gym customers also likely attend competitor regular-season competitions."[78] He goes on to further write, "each season only between approximately 18 percent and 23 percent of Varsity All Star customers attended the same number of Varsity competitions that they attended the previous season. The common season-to-season change indicate that All Star gyms have the flexibility in scheduling their season to either increase or decrease the number of competitions they attend or to switch between Varsity's competitions and those of other producers (or both)."[79]

147. I do not claim in my first report that Varsity is a perfect monopolist, meaning that it has a 100% market share, or that there are separate markets for Varsity and non-Varsity competitions. Dr. Murphy agrees with me as he opines in his deposition testimony that Varsity and non-Varsity competitions belong in the same relevant product market.[80]

148. Further, Dr. Murphy's conclusions on Varsity customers attending "competitor regular-season competitions" is not based on any data or documents showing that gyms attend competitions operated by rival event producers.[81] Instead, he only analyzes patterns of attendance at Varsity events. He assumes, without evidence, that any change in the number of Varsity events attended year-to-year means that the gym must be attending an event operated by a rival event producer. He performs no analysis of gym finances or the how the number of athletes on gym teams changes year-to-year to determine if such variations are standard for gyms.

IV.A.5. The Fact That There is Differentiation Among Cheer Competitions Does Not Disprove My Relevant Product Market Definition

149. Dr. Murphy writes, "[c]heer competitions vary considerably in the number of participants, the event length, cost, and a variety of other factors."[82]

150. I agree with Dr. Murphy's statement. Yet, as he himself testifies, "[t]hings don't have to be identical to be in the same market."[83] As previously described, Dr. Murphy ignores the

[78] Murphy Report, ¶ 164 (internal citations omitted).
[79] Murphy Report, ¶ 165 (internal citations omitted).
[80] Murphy Deposition, November 4, 2022, 120:11-16 ("Q. Should non-Varsity competitions and Varsity competitions be considered to be distinct product markets. A. I wouldn't generally think so. I don't think we have evidence to say they are in distinct product markets.").
[81] Murphy Report, ¶ 164.
[82] Murphy Report, ¶ 166 (internal citations omitted).
[83] Murphy Deposition, November 4, 2022, 115:12-23 ("things don't have to be identical to be in the same market.").

significant similarities between All-Star cheer teams (consisting of athletes from All-Star gyms) and school cheer teams (consisting of athletes from schools). Varsity's Vice President of Marketing and Communications, Jackie Kennedy, described such similarities in her deposition testimony: "some of the similarities are around the athleticism, and some of the skills"[84]; "the athleticism portion, where there are jumps, stunts, tumbling, or a dance, those would be comparable";[85] both All Star cheer teams and school cheer teams "have the option to [purchase apparel]";[86] "it's the same registration system" for All Star cheer teams and school cheer teams to register for Varsity events;[87] the same marketing department covered by All Star cheer and school cheer;[88] and Varsity TV broadcast content for both All Star cheer and school cheer.[89]

IV.A.6. 1-Day and 2-Day Cheer Competitions are in the Same Relevant Product Market

151. Dr. Murphy writes, "[t]he differences in various types of regular-season competitions (i.e., 1-day or 2-day, Fall or Spring), including differences in cost, time commitment requirements, timing, and location limit the extent of substitution between them."[90] Dr. Murphy further writes, "[s]cholastic competitions also show distinct attendance patterns compared to All Star. Both 1-day and 2-day scholastic competitions exhibit higher rates of repeat attendance and lower rates of substitution (both within- and across-type) than All Star competitions."[91]

152. Dr. Murphy did not identify whether events were 1-day events or 2-day events for more than 2,000 observations in his dataset.[92] Yet, he presents a stark difference between 1-day and 2-day events. I agree that there is differentiation among 1-day and 2-day events. There is also differentiation among World Bids Events and non-World Bids Events. There is also differentiation between postseason events and regular-season events. Yet, despite these differences, as I describe in my first report, the facts that I evaluated form the basis for my opinion that all these events (1-day vs. 2-day; World Bids Events vs. non-World Bids Events;

[84] Deposition of Jackie Kennedy, March 16, 2022, 302:12-14.
[85] Id., 302:19-21.
[86] Id., 303:10-13.
[87] Id., 303:22-304:5.
[88] Id., 305:10-16.
[89] Id., 305:21-25.
[90] Murphy Report, ¶ 169 (internal citations omitted).
[91] Murphy Report, ¶ 179 (internal citations omitted).
[92] Deposition of Kevin Murphy, November 3, 2022 (hereinafter "Murphy Deposition, November 3, 2022"), 221:2-9.

postseason vs. regular season) belong in the same relevant antitrust product market.[93]

IV.A.7. There is a Single Relevant Product Market for Cheer Camps

153. Dr. Murphy writes, "Dr. Heeb and Dr. Netz each start their analysis of market definition for the claims related to cheer camps by assuming that the relevant market is at least broad enough to encompass all types of camps. They do not consider any of the differences among the various types of camps, including their size, duration, or setting, and how these could diminish substitution in response to small price increases."[94]

154. I considered the differences in camps, and the evidence on camps formed the basis for my opinions that there is a single relevant product market for cheer camps. From 2015 to 2020, 99.3% of camp registrations were for camps between 1-day and 5-days.[95] The most common registration was for 4-day camps which made up 39.4% of the total camp registrations.[96]

155. Varsity's camp registration records identified eight types of camps: campground camps, clinics, day camps, home camps, hotel camps, online camps, resort camps, and university camps.[97] Of these types of camps, university camps had the most registrations with over 35,000 registrations from 2015 to 2020.[98] This was closely followed by home camps which had around 32,000 registrations in the data.[99] University camps, home camps, clinics, and resort camps made up 87.5% of all camp registrations from 2015-2020.[100]

156. My analysis of customer travel patterns for Varsity cheer camps (see Table 9 and Table 10) provide evidence of customer substitution patterns by geography. This customer substitution evidence, a key indicium under *Brown Shoe* framework, corroborates the regional market definitions for cheer camps. First, of the seven types of camps for which customer substitution patterns are relevant ("Campground Camps", "Clinics", "Day Camps", "Home Camps", "Hotel Camp", "Resort Camp", and "University Camp", excluding only "Online Camps"), 92% of the entrants and 94% of the registration fees are from customers that travel within its region for a camp (see Table 9). This provides strong support that the relevant

[93] Heeb Report, ¶¶ 127-135.
[94] Murphy Report, ¶ 184 (internal citations omitted).
[95] Camps Registration Data.
[96] Ibid.
[97] Ibid.
[98] Ibid.
[99] Ibid.
[100] Ibid.

geographic markets for cheer camps are no larger than regional markets.

157. Second, I identify camps customers and camps that are both located in an MSA or a broader CSA. Of the four types of camps for which such CSA location information is available ("Clinics", "Home Camps", "Hotel Camps", and "University Camps), only 28% of the entrants and only 24% of the registration fees are from customers that travel within its CSA for a camp (Table 10). If either a customer or a camp is not located in a CSA, then customer travel to attend that camp must cross a CSA border, and thus the percentage of within-CSA travel identified above is an overstatement of the amount of overall within-CSA travel. This provides strong support that the relevant geographic markets for cheer camps are not as small as CSAs.

158. Therefore, applying the *Brown Shoe* indicium for customer substitution patterns establishes that the relevant geographic markets for cheer camps are not as small as CSAs and no bigger than regions; hence the relevant geographic markets are the regional.

IV.A.8. The Relevant Geographic Markets for Cheer Camps and Cheer Competitions Are Regional

IV.A.8.a) Regular-Season All-Star Competitions

159. Dr. Murphy writes, "it is my opinion that the relevant geographic markets for regular-season All Star competitions are local and no larger than the regions around each such event that capture 60% of the participation at other events attended by the participants in the reference event."[101]

160. Dr. Murphy's 60% catchment area is arbitrary. There is no reason not to consider a 50% catchment area or a 70% catchment area. The *sine qua non* of relevant geographic market definition is to identify geographic areas for which there is a presumption of market power or direct evidence demonstrating market power, and geographic areas without these competitive concerns. Then, based upon that identification, economic analysis identifies the harm to competition within that defined geographic region for which there is a presumption of market power or direct evidence demonstrating market power. Customers in such geographic areas suffer harm not just through the monopolist's exploitation of its market power, but additionally because they are unable to meaningfully substitute to products

[101] Murphy Report, ¶ 196 (internal citations omitted).

outside the relevant geographic market (which is the definition of the relevant geographic market), particular to products in geographic areas for which there are no competition concerns.

161. Thus, even under Dr. Murphy's arbitrary catchment area methodology, he fails to perform an analysis of the harm to competition between and across neighboring catchment areas. I demonstrate in Figure 1 that Varsity's market power is ubiquitous across nearly all the conceptual catchment areas that Dr. Murphy considers and across nearly all populated areas of the United States.

IV.A.8.b) School Competitions

162. Dr. Murphy states, "the relevant geographic market for scholastic regional competition is local or regional, not national."[102]

163. I agree with Dr. Murphy, and that is exactly what I opined to in my first report. First, I opined in my first report that "[the anticompetitive] conduct is national in scope."[103] Second, I opined in my first report that: "That there is a cost of travel implies that there is a limit to how far teams may travel to avoid a price increase in even entry fees imposed by a monopolist. Cheer teams may routinely travel hundreds of miles to attend a competition. They may travel to various parts of the United States to participate in important events, such as the World of the Summit competitions, but would not routinely do so to attend regular season events. Therefore, events that were further away than this distance would not compete on price with each other, unless there were other events located between them that competed with both and effectively conveyed the competitive effect beyond the travel radius of an individual team. Thus, as a technical matter, the relevant geographic market for antitrust purposes is smaller than national, and larger than local communities. Hence it is regional."[104]

IV.A.8.c) Cheer Camps

164. Dr. Murphy writes, "[l]ikewise, the consumer travel patterns for camps imply limited geographic markets, though again the precise extent of these markets is not necessary to establish for the purposes of my analyses of the relevant claims."[105]

[102] Murphy Report, ¶ 197 (internal citations omitted).
[103] Heeb Report, ¶ 138.
[104] Heeb Report, ¶¶ 139-140 (internal citations omitted).
[105] Murphy Report, ¶ 198 (internal citations omitted).

165. I analyze travel patterns at the level of the five geographic regions used by USASF by quantifying how many customers travel to Varsity camps in the same region (i.e., the customer address is in the same USASF-defined region as the camp address) and how many travel to camps in different regions (i.e., the customer address is in a different USASF-defined region than the camp address). Table 9 below summarizes my analysis.

166. As shown in Table 9 below, I quantify travel patterns separately for the different types of camps reported in Varsity's camps registration data. The "Revenue Share" information reports that the "University Camps" generate a majority of the revenue across all seven types of Varsity camps (see Table 9). Across all the different types of Varsity cheer camps, 92% of the entrants and 94% of the registration fees are from customers that travel within its USASF-defined region for a camp. In summary, there is little support for any claims that the relevant geographic market is larger than regional.

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Table 9. Fraction of Varsity's Cheer Camps Customers that Attend Camps in their Home Region

Year	Type of Camp	Revenue Share	Entrants		Registration Fees	
			Same Region	Different Region	Same Region	Different Region
2015	University Camp	52.3%	96%	4%	96%	4%
	Resort Camp	19.8%	94%	6%	95%	5%
	Home Camp	16.3%	87%	13%	87%	13%
	Hotel Camp	5.5%	96%	4%	96%	4%
	Day Camp	3.7%	90%	10%	90%	10%
	Clinic	1.8%	94%	6%	96%	4%
	Campground Camp	0.6%	100%	0%	100%	0%
2016	University Camp	50.0%	95%	5%	95%	5%
	Resort Camp	21.3%	94%	6%	95%	5%
	Home Camp	17.2%	86%	14%	86%	14%
	Hotel Camp	5.4%	96%	4%	96%	4%
	Day Camp	3.5%	89%	11%	89%	11%
	Clinic	2.0%	91%	9%	92%	8%
	Campground Camp	0.6%	100%	0%	100%	0%
2017	University Camp	47.8%	95%	5%	95%	5%
	Resort Camp	21.8%	95%	5%	95%	5%
	Home Camp	17.6%	86%	14%	86%	14%
	Hotel Camp	6.3%	98%	2%	97%	3%
	Day Camp	3.3%	92%	8%	92%	8%
	Clinic	2.5%	90%	10%	94%	6%
	Campground Camp	0.8%	100%	0%	100%	0%
2018	University Camp	45.8%	95%	5%	95%	5%
	Resort Camp	20.9%	96%	4%	97%	3%
	Home Camp	18.9%	87%	13%	86%	14%
	Hotel Camp	8.0%	95%	5%	95%	5%
	Day Camp	3.1%	91%	9%	90%	10%
	Clinic	2.5%	88%	12%	93%	7%
	Campground Camp	0.8%	100%	0%	100%	0%
2019	University Camp	43.9%	94%	6%	95%	5%
	Resort Camp	22.0%	96%	4%	97%	3%
	Home Camp	20.0%	86%	14%	86%	14%
	Hotel Camp	8.2%	91%	9%	91%	9%
	Day Camp	2.8%	89%	11%	88%	12%
	Clinic	2.4%	90%	10%	93%	7%
	Campground Camp	0.7%	100%	0%	100%	0%
Total	University Camp	47.8%	95%	5%	95%	5%
	Resort Camp	21.2%	95%	5%	96%	4%
	Home Camp	18.1%	86%	14%	86%	14%
	Hotel Camp	6.8%	95%	5%	95%	5%
	Day Camp	3.3%	90%	10%	90%	10%
	Clinic	2.2%	90%	10%	93%	7%
	Campground Camp	0.7%	100%	0%	100%	0%
Total			92%	8%	94%	6%

Sources: Camps Registration Data.

167. I further analyze travel patterns by quantifying how many customers travel to Varsity camps in the same CSA (i.e., the customer address is in the same CSA as the camp address) and how many travel to competitions in different CSAs (i.e., the customer address is in a different CSA than the camp address). I limit my analysis to customers with addresses in the cities named in the definition of the MSAs that make up a CSA and to camps with addresses in the cities named in the definition of the MSAs that make up a CSA.[106] If an MSA is not part of a larger CSA, I define that geographic area as both a MSA and CSA for the purpose of my analysis.[107] I am excluding customers that do not live in any CSA and am excluding camps that are not located in any CSA. Any customers and camps in the excluded data require the customer to travel across the boundary of a CSA, by definition, to attend that camp. Table 10 below summarizes my analysis.

168. As shown in Table 10 below, I quantify travel patterns separately for the types of camps in the matched subsample of data containing both customers in CSAs and camps in CSAs. The "Revenue Share" information reports that the "University Camps" generate a substantial majority of the revenue among all types of Varsity camps in this matched subsample of data (see Table 10). Across these four types of Varsity camps, only 28% of the entrants and 24% of the registration fees are from customers that travel within its CSA for a camp. The facts in evidence clearly show that too many customers substitute to camps outside this localized geographic area to justify defining the relevant geographic markets this narrowly.

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[106] CSA/MSA Information and Populations.

[107] For instance, the metropolitan statistical area (MSA) of San Diego-Chula Vista-Carlsbad, CA consists of three named cities in California: San Diego, Chula Vista, and Carlsbad. It is not part of a larger CSA, according to the official definitions of the U.S. Office of Management and Budget (OMB). Yet, when comparing travel patterns inside and outside CSAs, I consider any customers with customer addresses in either San Diego, Chula Vista, or Carlsbad to have its customer address in the "San Diego-Chula Vista-Carlsbad, CA" MSA and in the CSA with the same name. See CSA/MSA Information and Populations.

Table 10. Fraction of Varsity's Cheer Camps Customers that Attend Camps in their Home CSA

Year	Type of Camp	Revenue Share	Entrants		Payments	
			Same CSA	Different CSA	Same CSA	Different CSA
2015	University Camp	92.4%	27%	73%	26%	74%
	Hotel Camp	3.0%	0%	100%	0%	100%
	Home Camp	2.3%	89%	11%	88%	12%
	Clinic	2.1%	28%	72%	25%	75%
	Day Camp	0.2%	100%	0%	100%	0%
2016	University Camp	88.6%	27%	73%	26%	74%
	Hotel Camp	5.7%	12%	88%	12%	88%
	Home Camp	3.4%	97%	3%	97%	3%
	Clinic	2.3%	43%	57%	40%	60%
	Day Camp	0.1%	100%	0%	100%	0%
2017	University Camp	90.7%	26%	74%	23%	77%
	Hotel Camp	4.3%	6%	94%	6%	94%
	Home Camp	2.5%	100%	0%	100%	0%
	Clinic	2.4%	43%	57%	44%	56%
	Day Camp	0.1%	100%	0%	100%	0%
2018	University Camp	89.5%	23%	77%	22%	78%
	Hotel Camp	3.7%	14%	86%	12%	88%
	Home Camp	3.5%	100%	0%	100%	0%
	Clinic	3.3%	36%	64%	34%	66%
2019	University Camp	88.9%	27%	73%	24%	76%
	Hotel Camp	4.4%	11%	89%	11%	89%
	Clinic	3.6%	30%	70%	27%	73%
	Home Camp	3.1%	97%	3%	97%	3%
Total	University Camp	90.1%	26%	74%	24%	76%
	Hotel Camp	4.2%	9%	91%	9%	91%
	Home Camp	2.9%	97%	3%	97%	3%
	Clinic	2.7%	36%	64%	34%	66%
	Day Camp	0.1%	100%	0%	100%	0%
Total			30%	70%	26%	74%

Sources: Camps Registration Data; CSA/MSA Information and Populations.

169. If the relevant geographic markets for cheer camps are no broader than regional markets, and not as narrow as CSA localized markets, then the appropriate relevant geographic markets are regional.

IV.A.9. The Relevant Geographic Markets for Cheer Camps and Cheer Competitions Are Regional with Common Impact Across All Regions For Purposes of Class Certification

IV.A.9.a) Travel patterns

170. Dr. Murphy states, "[n]either Dr. Heeb nor Dr. Netz provide any reasonable or reliable economic analysis as to the proper geographic markets for their analysis of the contested

conduct. For example, neither Dr. Heeb nor Dr. Netz appear to have examined any actual travel patterns by participants in competitions and camps before reaching their conclusions regarding the relevant geographic markets."[108]

171. I considered customer travel patterns in my first report.[109] In addition to that initial analysis, I further analyze travel patterns at the level of the five geographic regions used by USASF by quantifying how many All-Star gyms travel to competitions in the same region (i.e., the customer address is in the same USASF-defined region as the competition address) and how many travel to competitions in different regions (i.e., the customer address is in a different USASF-defined region than the competition address). Table 11 below summarizes my analysis.

172. As shown in Table 11 below, I quantify travel patterns separately for two types of competitions: World Bid Events (which are regular season events) and regular season events that are not World Bids Events. Postseason competitions are excluded from the analysis as the postseason events take place in Florida, which requires that any teams attending these competitions would need to travel from their home region to the Southeast region containing Florida. For regular season competitions that are not World Bid Events, 93% of the entrants and 92% of the registration fees are from All-Star gyms that travel within its USASF-defined region for a competition. For World Bid Events, 75% of the entrants and 74% of the registration fees are from All-Star gyms that travel within its USASF-defined region for a competition. For the regular season competitions (both World Bids Events and non-World Bids Events), the fact that between 74%-93% of entrants and registration fees stay within USASF-defined regions proves that the relevant geographic markets are no larger than the regions as defined by USASF. In summary, there is little support for any claims that the relevant geographic market is larger than regional.

[108] Murphy Report, ¶ 200 (internal citations omitted).
[109] Heeb Report, ¶ 139 ("Cheer teams may routinely travel hundreds of miles to attend a competition.").

Table 11. Fraction of Varsity's Cheer All-Star Competitions Customers that Attend Competitions in their Home Region

Season	Type of Event	Entrants		Registration Fees	
		Same Region	Different Region	Same Region	Different Region
2013-2014	Regular Season (Not World Bids) Events	94%	6%	93%	7%
	World Bids Events	69%	31%	70%	30%
2014-2015	Regular Season (Not World Bids) Events	93%	7%	92%	8%
	World Bids Events	72%	28%	71%	29%
2015-2016	Regular Season (Not World Bids) Events	93%	7%	92%	8%
	World Bids Events	75%	25%	73%	27%
2016-2017	Regular Season (Not World Bids) Events	93%	7%	92%	8%
	World Bids Events	77%	23%	75%	25%
2017-2018	Regular Season (Not World Bids) Events	92%	8%	92%	8%
	World Bids Events	77%	23%	75%	25%
2018-2019	Regular Season (Not World Bids) Events	91%	9%	92%	8%
	World Bids Events	78%	22%	76%	24%
Total	Regular Season (Not World Bids) Events	93%	7%	92%	8%
	World Bids Events	75%	25%	74%	26%
Total	Total	87%	13%	84%	16%

Sources: Varsity Registration Data; World Bids Events Data; CSA/MSA Information and Populations.

173. I further analyze travel patterns by quantifying how many All-Star gyms travel to competitions in the same CSA (i.e., the customer address is in the same CSA as the competition address) and how many travel to competitions in different CSAs (i.e., the customer address is in a different CSA than the competition address). I limit my analysis to customers with addresses in the cities named in the definition of the MSAs that make up a CSA.[110] If an MSA is isolated from other MSAs and is not part of a larger CSA, I consider that MSA a CSA for the purpose of my analysis.[111] In this way, I am excluding customers that do not live in any CSA (and therefore, by definition, must travel across the boundary of a CSA to attend a competition). Table 12 below summarizes my analysis.

174. As shown in Table 12 below, I quantify travel patterns separately for the same two types of competitions: World Bid Events and non-World Bids Events. Postseason competitions are excluded from the analysis as the postseason events take place in the "Orlando-Lakeland-

[110] CSA/MSA Information and Populations.

[111] For instance, the metropolitan statistical area (MSA) of San Diego-Chula Vista-Carlsbad, CA consists of three named cities in California: San Diego, Chula Vista, and Carlsbad. It is not part of a larger CSA, according to the official definitions of the U.S. Office of Management and Budget (OMB). Yet, when comparing travel patterns inside and outside CSAs, I consider any customers with customer addresses in either San Diego, Chula Vista, or Carlsbad to have its customer address in the "San Diego-Chula Vista-Carlsbad, CA" MSA and in the CSA with the same name. See CSA/MSA Information and Populations.

Deltona, FL CSA," which requires that any teams attending these competitions would need to travel from their home CSA to the "Orlando-Lakeland-Deltona, FL CSA." For regular season competitions that are not World Bid Events, only 34% of the entrants and 30% of the registration fees are from All-Star gyms that travel within its CSA for a competition. The shares of within-CSA travel for World Bids Events are negligible. The fact that 73% of entrants and 78% of participation fees from regular season competitions (both World Bids Events and non-World Bids Events) travel outside of the CSA demonstrates that the relevant geographic market is not as narrow as CSAs. The facts in evidence clearly show that too many customers substitute to competitions outside this localized geographic area to justify defining the relevant geographic markets this narrowly.

Table 12. Fraction of Varsity's Cheer All-Star Competitions Customers that Attend Competitions in their Home CSA

Season	Type of Event	Entrants		Registration Fees	
		Same CSA	Different CSA	Same CSA	Different CSA
2013-2014	Regular Season (Not World Bids) Events	33%	67%	28%	72%
	World Bids Events	10%	90%	8%	92%
2014-2015	Regular Season (Not World Bids) Events	34%	66%	29%	71%
	World Bids Events	9%	91%	7%	93%
2015-2016	Regular Season (Not World Bids) Events	35%	65%	30%	70%
	World Bids Events	10%	90%	9%	91%
2016-2017	Regular Season (Not World Bids) Events	33%	67%	29%	71%
	World Bids Events	9%	91%	9%	91%
2017-2018	Regular Season (Not World Bids) Events	33%	67%	30%	70%
	World Bids Events	12%	88%	10%	90%
2018-2019	Regular Season (Not World Bids) Events	34%	66%	31%	69%
	World Bids Events	14%	86%	12%	88%
Total	Regular Season (Not World Bids) Events	34%	66%	30%	70%
	World Bids Events	11%	89%	9%	91%
Total	Total	27%	73%	22%	78%

Sources: Varsity Registration Data; World Bids Events Data; CSA/MSA Information and Populations.

175. If the relevant geographic markets for cheer competitions are no broader than regional markets, and not as narrow as CSA localized markets, then the appropriate relevant geographic markets are regional. This is exactly the opinion that I offered in my first

report.[112]

IV.A.9.b) USASF regions are practical indicia of regional boundaries

176. Dr. Murphy notes that my opinion from my first report that the relevant geographic markets for cheer competitions are regional and "[t]here are multiple alternative definitions of the regions that would all qualify as relevant antitrust markets under a hypothetical monopolist test (HMT)." Dr. Murphy then claims that my choice of regions that coincide with USASF's geographical organization of its business into regions is "arbitrary" and without economic basis.[113]

177. USASF did not arbitrarily choose the five regions that it uses to organize its business operations. Typically, businesses organizing their operations into separate regions do so because common features within those regions facilitate more efficient management. One feature in common throughout each region is Varsity's consistently very high market share. This is an example of a *Brown Shoe* practical indicia of a product market for antitrust purposes. "The boundaries of such a submarket may be determined by examining such practical indicia as industry [] recognition of the submarket as a separate economic entity."[114]

178. As previously applied (see Table 6 and Table 7), I used Varsity's regional market shares, the share of Varsity entrants in the MSA relative to the region, and the share of the population in the MSA relative to the region to calculate the implied market share that Varsity maintains in a particular MSA. The implied market share is calculated as the weighted average over the seasons from 2016-2017 through 2019-2020, which are the four seasons that comprise the Class Period for which data was available. Details of my calculation are reported in Table 34 in the Appendix. For each MSA, I further consider all MSAs within a 250-mile radius around that MSA. For all MSAs encompassed within these 250-mile radius circles, I calculate the

[112] Heeb Report, ¶¶ 139-140 ("That there is a cost of travel implies that there is a limit to how far teams may travel to avoid a price increase in even entry fees imposed by a monopolist. Cheer teams may routinely travel hundreds of miles to attend a competition. They may travel to various parts of the United States to participate in important events, such as the World of the Summit competitions, but would not routinely do so to attend regular season events. Therefore, events that were further away than this distance would not compete on price with each other, unless there were other events located between them that competed with both and effectively conveyed the competitive effect beyond the travel radius of an individual team. Thus, as a technical matter, the relevant geographic market for antitrust purposes is smaller than national, and larger than local communities. Hence it is regional.")

[113] Murphy Report, ¶ 201.

[114] Baker (2000), p. 204, citing Brown Shoe, 370 U.S. at 325 (footnotes and citation omitted).

weighted average implied market share. The implied market share averaged across all MSAs in 250-mile radius circles centered around all MSAs is plotted in Figure 1 below.

179. If the implied market share for a 250-mile radius geographic area surround an MSA is greater than or equal to 40%, then the market would be classified by the DOJ/FTC as a "Moderately Concentrated Market" and "an increase in the HHI of more than 100 points [in such markets] potentially raise significant competitive concerns."[115] If the implied market share for a 250-mile radius geographic area surround an MSA is greater than or equal to 50%, then the market would be classified by the DOJ/FTC as a "Highly Concentrated Market" in which "an increase in the HHI of between 100 points and 200 points potentially raise significant competitive concerns and often warrant scrutiny" and "an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power."[116]

180. In Figure 1 below, the 250-mile radius circles are drawn in red if the implied market shares are greater than or equal to 50% ("presumed to be likely to enhance market power"), are drawn in orange if the implied market shares are greater than or equal to 40%, but less than 50% ("potentially raise significant competitive concerns"), and drawn in yellow if the implied market shares are less than 40% ("unlikely to have adverse competitive effects").[117]

181. These 250-mile radius circles correspond approximately to the "60% catchment" radius for 2-day events that Dr. Murphy describes in his hypothetical analysis of diversion of customers from one event to a competing event. In that example, 60% of the customers diverted by a price increase from the central location would find an alternative event within 250 miles. The other 40% of diverted customers would travel even further, according to Dr. Murphy's analysis.[118]

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[115] U.S. Department of Justice and Federal Trade Commission, "Horizontal Merger Guidelines," Issued: August 19, 2010, at §5.3. A company with a 40% market share contributes 1,600 ($40^2 = 1{,}600$) to the HHI of market concentration, meaning that even if the rest of the market were comprised of many smaller competitors, each with atomistic market shares, the HHI of market concentration would still exceed 1,600.

[116] U.S. Department of Justice and Federal Trade Commission, "Horizontal Merger Guidelines," Issued: August 19, 2010, at §5.3. A company with a 50% market share contributes 2,500 ($50^2 = 2{,}500$) to the HHI of market concentration, meaning that even if the rest of the market were comprised of many smaller competitors, each with atomistic market shares, the HHI of market concentration would still exceed 2,500.

[117] U.S. Department of Justice and Federal Trade Commission, "Horizontal Merger Guidelines," Issued: August 19, 2010, at §5.3.

[118] Some customers might divert into a choice to attend fewer events.

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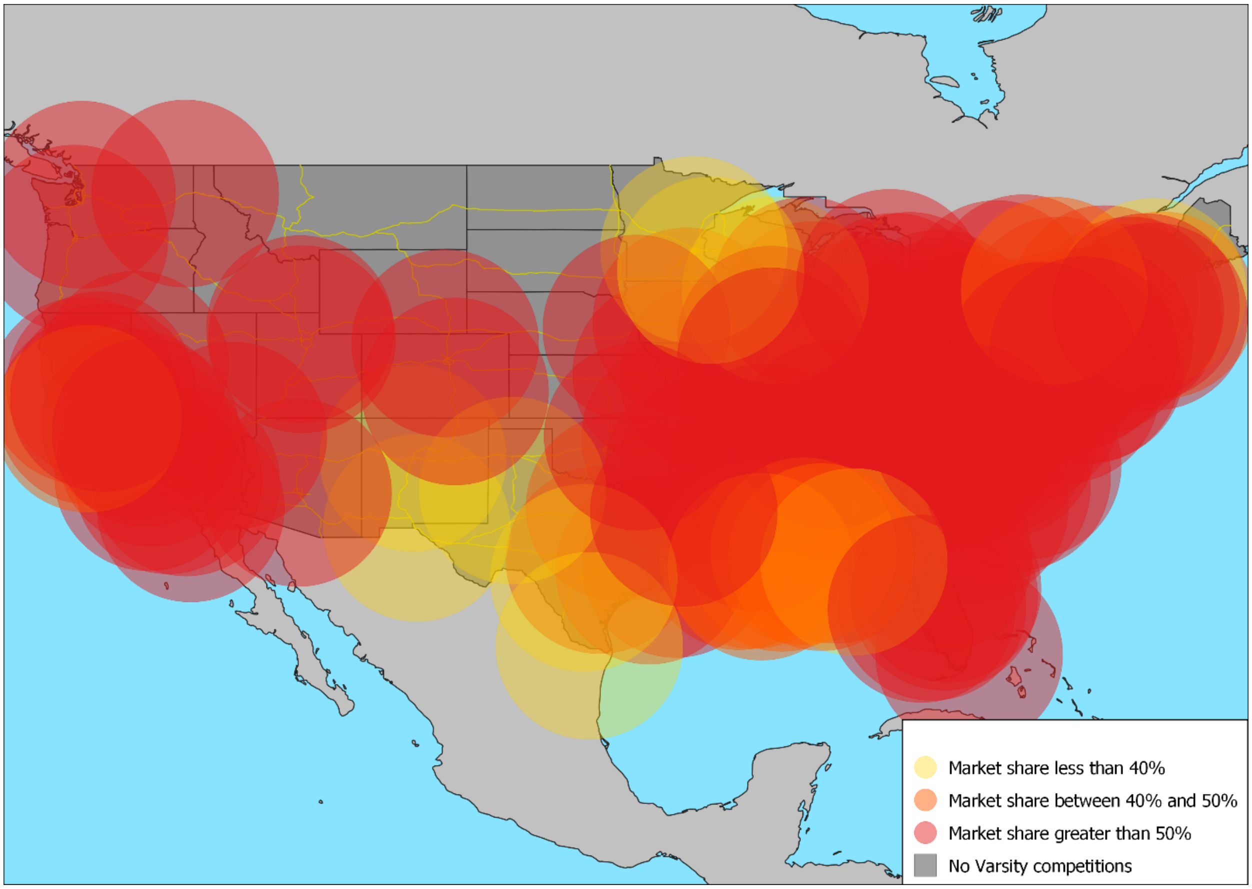
Figure 1. Map of 250-Mile Radius Regions Around All US MSAs with a Varsity Competition during the Class Period



Sources: Varsity Registration Data; World Bids Events Data; CSA/MSA Information and Populations.

Note: Red circles indicate 250-mile radius regions around MSAs with an average implied Varsity market share at or above 50% for which the DOJ/FTC Horizontal Merger Guidelines have established is a market concentration at levels that are "presumed to be likely to enhance market power." Orange circles indicate 250-mile radius regions around MSAs with an average implied Varsity market share at or above 40% and less than 50% for which the DOJ/FTC Horizontal Merger Guidelines have established is a market concentration at levels that "potentially raise significant competitive concerns." Yellow circles indicate 250-mile radius regions around MSAs with an average implied Varsity market share below 40% for which the DOJ/FTC Horizontal Merger Guidelines have established is a market concentration "unlikely to have adverse competitive effects." The "Urban Honolulu, HI MSA" MSA is not depicted in the map for space considerations. The circle around that Honolulu MSA was yellow.

182. The share of Varsity entrants attending events in red geographic areas ("presumed to be likely to enhance market power") equals 93.9% of Varsity's total entrants over the Class Period (see Table 34). As shown in Figure 1 above, the geographic areas where there is a presumption of market power or where the implied market shares raise significant competitive concerns comprise most of the populated geographic areas in the United States. The areas uncovered by a circle of any color represent geographic areas of the United States in which Varsity did not hold any competitions during the Class Period. Thus, by definition,

there are no harmed Class Members in the gray areas uncovered by a circle of any color. These geographic areas in the Western Plains states are sparsely populated areas of the United States. The share of Varsity entrants attending events in orange geographic areas ("potentially raise significant competitive concerns") equals 3.1% of Varsity's total entrants over the Class Period (see Table 34). Finally, the share of Varsity entrants attending events in yellow geographic areas ("unlikely to have adverse competitive effects") equals 3.0% of Varsity's total entrants over the Class Period and only includes the following MSAs: Madison, WI; Minneapolis, MI; Rochester, MN; Manchester, NH; Panama City, FL; Albuquerque, NM; El Paso, TX; Lubbock, TX; McAllen, TX; San Antonio, TX; and Honolulu, HI (see Table 34).[119]

183. The broad overlap of these geographic areas illustrates the point that competition can be propagated geographically by sequences of close competitors, each competing with its neighbors, that in turn compete with their neighbors, such that the competitive price discipline is spread further than the limit of events that compete with a single candidate at an arbitrarily chosen first point. The second important take-away from this graphic is that Varsity's market power, in regions that are continuous or nearly continuous red or orange, is pervasive and ubiquitous.

184. As previously described, in my first report, I performed a quantitative analysis of common impact at the level of a CSA, which is a localized geographic area.[120] That analysis confirms that there is common impact of the conduct across CSAs in a region. I opined in my first report: "That there is a cost of travel implies that there is a limit to how far teams may travel to avoid a price increase in even entry fees imposed by a monopolist. Cheer teams may routinely travel hundreds of miles to attend a competition. They may travel to various parts of the United States to participate in important events, such as the World or the Summit competitions, but would not routinely do so to attend regular season events. Therefore, events that were further away than this distance would not compete on price with each other, unless there were other events located between them that competed with both and effectively conveyed the competitive effect beyond the travel radius of an individual team. Thus, as a

[119] Minneapolis, MN; San Antonio, TX; and Honolulu, HI are the only MSAs with implied market share below 40% that are significant population centers with MSA population exceeding one million people.

[120] Heeb Report, ¶¶ 141-144; ¶¶ 313-316; ¶¶ 327-331; Table 27.

technical matter, the relevant geographic market for antitrust purposes is smaller than national, and larger than local communities. Hence it is regional."[121]

185. Dr. Murphy's 60% catchment area is arbitrary. There is no reason not to consider a 50% catchment area or a 70% catchment area. Under his arbitrary application of catchment areas, Dr. Murphy's opinions are that the geographic markets include either 100-mile distances from customer address to competition address (based on the travel patterns for 1-day competitions) or 250-mile distances from customer address to competition address (based on the travel patterns for 2-day competitions). Though he does not identify boundaries for geographic markets, the 250-mile radius circles that he conceptually considers around a Varsity competition location are consistent with the implied market share maps in Figure 1. As previously described, the geographic areas overlap substantially and Varsity's market power is ubiquitous across neighboring areas and throughout nearly all of the populated areas of the United States.

186. In addition to the analysis of 250-mile radius circles around MSAs, I quantify, consistent with the *Brown Shoe* indicia, the in-market and out-market customer travel patterns and offers strong support for the relevant geographic markets as I have defined them (see Table 11 and Table 12 above).

187. Dr. Murphy repeatedly mischaracterizes my opinions, claiming that I endorse a national market for competitions and camps. This is not accurate. I endorse a common national measure of overcharges as an appropriate and accurate measure of damages.

188. To recap, I opined in my first report that the relevant geographic markets are regional, specifically the five regions that USASF uses to organize its business operations.[122] Separately, for the issue of competitive effects, common impact, and other class certification questions, I opined that Varsity's anticompetitive conduct is common across these five

[121] Heeb Report, ¶¶ 139-140 (internal citations omitted).

[122] Heeb Report, ¶¶ 139-140 ("That there is a cost of travel implies that there is a limit to how far teams may travel to avoid a price increase in even entry fees imposed by a monopolist. Cheer teams may routinely travel hundreds of miles to attend a competition. They may travel to various parts of the United States to participate in important events, such as the World of the Summit competitions, but would not routinely do so to attend regular season events. Therefore, events that were further away than this distance would not compete on price with each other, unless there were other events located between them that competed with both and effectively conveyed the competitive effect beyond the travel radius of an individual team. Thus, as a technical matter, the relevant geographic market for antitrust purposes is smaller than national, and larger than local communities. Hence it is regional.")

relevant geographic markets, because their pricing and business decisions are national in scope; due to my quantitative analysis demonstrating that the Varsity has consistently high market shares, often so high as to have presumptive market power, throughout the country; that the regional overcharge analysis tends to corroborate that nationally common overcharge estimates are consistent with, and most often statistically indistinguishable from the best separate regional estimates; and that measured overcharges are material everywhere.[123] Therefore, my opinion from my first report (and further corroborated in this report) is that a common overcharge can and should be applied for all Varsity customers in the United States, in each of the regional antitrust markets.

189. Dr. Murphy states, "Dr. Heeb's conclusion that the geographic market is irrelevant contradicts economic principles and is inconsistent with the conduct analysis that he conducts in his report."[124] Dr. Murphy exploits my imprecise use of the word "irrelevant." I do not believe, and I did not intend to imply, that geographic market definition is irrelevant in general. I meant (and I believe that this was apparent) that the fact that markets are regional does not preclude a common level of overcharges existing across multiple regional markets. This is particularly true, when as in this case, the regional markets are continuously overlapping areas without identified unique boundaries, and with similar market power throughout most of them.

190. Dr. Murphy does not elaborate on what economic principles are violated, though I understand that he disagrees with my conclusions.[125] However, what is beyond disagreement is a simple logical statement: if competitive harm is common across all geographic markets, both qualitatively and quantitatively, then the harm for all Class Members can be calculated and applied nationwide. I demonstrated in my first report, and as described above, that the competitive harm is common across all relevant geographic markets, both qualitatively and quantitatively.[126]

[123] Heeb Report, ¶ 138 ("[the anticompetitive] conduct is national in scope."); ¶ 275 ("Although Varsity price changes were implemented at a local level, the pricing strategy itself was national in practice in terms of rationale and commonality of impact. Variations in price or price changes are not individualized but can be determine [sic] using common evidence."); Tables 21 and 22.
[124] Murphy Report, ¶ 202 (internal citations omitted).
[125] Murphy Report, ¶ 202.
[126] Heeb Report, Tables 21 and 22; ¶ 275 ("Although Varsity price changes were implemented at a local level, the pricing strategy itself was national in practice in terms of rationale and commonality of impact. Variations in price or price changes are not individualized but can be determine [sic] using common evidence.")

191. Dr. Murphy discusses my analysis of the effects of Varsity acquisitions but mischaracterizes both the analyses and their relationship to market definition questions, stating that I "force" my analysis "to find common, nationwide effects from the acquisitions and other conduct."[127] This mischaracterizes my analyses. In one analysis of Varsity acquisitions, I demonstrated that Varsity often raises the price of acquired events to price levels similar to Varsity's legacy events. Varsity also discontinues some events and initiates new events under the acquired brand name at higher prices than the discontinued pre-acquisition prices. This analysis does not require any reference to particular geography or market. I also include pre- and post-acquisition event prices along with Varsity legacy event prices in regressions to determine monopoly overcharges. Those regressions are done both with separate regional-level overcharges, and with uniform national overcharge estimates. My conclusions are based analysis and comparison of both sets of results.

192. First, I opined in my first report that the relevant geographic markets are regional, specifically the five regions that USASF uses to organize their business operations.[128] Second, I do not "force" the analysis to do anything. The econometric analysis that I perform identifies the empirical fact patterns in the data.[129] Those facts include that Varsity's anticompetitive conduct has similar impact across the relevant geographic markets.[130]

193. Third, while several of the acquired event producers were limited to certain geographies (e.g., Spirit Celebration in Texas and All Things Cheer on the Pacific Coast), the larger and more important acquisitions were not limited to regional geographies. For example, the acquisition of Aloha Productions included three World Bids Events: the GSSA Championships in California; the Aloha Championships on the West Coast; and the Mid Atlantic Championships in New Jersey (see Table 37). Further, the JamBrands acquisition allowed

[127] Murphy Report, ¶ 202 (internal citations omitted).
[128] Heeb Report, ¶¶ 139-140 ("That there is a cost of travel implies that there is a limit to how far teams may travel to avoid a price increase in even entry fees imposed by a monopolist. Cheer teams may routinely travel hundreds of miles to attend a competition. They may travel to various parts of the United States to participate in important events, such as the World of the Summit competitions, but would not routinely do so to attend regular season events. Therefore, events that were further away than this distance would not compete on price with each other, unless there were other events located between them that competed with both and effectively conveyed the competitive effect beyond the travel radius of an individual team. Thus, as a technical matter, the relevant geographic market for antitrust purposes is smaller than national, and larger than local communities. Hence it is regional.")
[129] Heeb Report, Tables 21 and 22.
[130] Heeb Report, Tables 21 and 22.

Varsity to acquire a roster of events with nationwide reach.[131] The acquisition of JamBrands, for example, included five World Bids Events in the states of Indiana, Ohio, Maryland, Missouri, and Illinois (see Table 41). And, in the aggregate, Varsity's acquisition of eight rival event producers from 2014-2018 allowed it to obtain events across all major CSAs throughout the United States.[132]

194. Fourth, Dr. Murphy suggests that the acquired brand events only occurred in a small number of localized areas.[133] To the contrary, the acquisition of the seven acquired brands for which we have available data (Aloha, All Things Cheer, CSG, EPIC, JamBrands, Mardi Gras, and Spirit Celebration) represented well over 200+ events spread across all five USASF regions and most or all major CSAs. The fact that a few of the acquisitions were regional in nature, such as All Things Cheer on the Pacific Coast, does not mean that all acquisitions, when considered in their totality, did not represent a nationwide effect across all major CSAs, particularly given a common acquisition and integration strategy implied across all acquisitions.

195. Fifth, and finally, Dr. Murphy performs no analysis of Varsity's acquisitions prior to 2014. In my first report, I analyzed Varsity's acquisitions from 2014- 2018 as I had data on the pre-acquisition prices set by the rival event producers for most of these acquisitions.[134] However, as a central premise of my analysis, I recognized three facts. First, Varsity had established a dominant market share in the competition markets prior to 2014.[135] Second, that dominant market share had been established through prior acquisitions.[136] Third, a proper accounting of competitive harm required an understanding of the market conditions and competitive dynamics leading up to Varsity's acquisitions in 2014 (Cheer Ltd.) and 2015 (JamBrands)

[131] See, e.g., VAR00239859, showing 75+ JamBrands events spanning all five USASF regions.

[132] The eight acquisitions included 15 World Bids Events located in South Carolina, Indiana, Ohio, Maryland, Missouri, Illinois, New Jersey, California, Arizona, Texas, Washington, and Louisiana. Varsity acquired 11 rival event producers from 2004-2012 that included 12 World Bids Events in Texas, Rhode Island, Indiana, Kentucky, Nevada, California, Ohio, Georgia, New Jersey, Connecticut, and Oregon. See the Appendix.

[133] Murphy Report, ¶ 202.

[134] In my first report, I analyzed data for five of the eight acquisitions. Upon reading Dr. Murphy's report, I became aware of pre-acquisition data for two additional event producers: All Things Cheer and Spirit Celebration. With this new information, I update my analysis to include pre-acquisition data for seven of the eight event producers.

[135] Heeb Report, Table 10.

[136] Heeb Report, ¶ 93 (listing acquisitions of NCA and UDA in 2004, Spirit Festival in 2011, and CHEERSPORT and Universal Spirit in 2012).

and its six acquisitions in 2017-2018.[137]

196. Dr. Murphy's ignores pre-2014 Varsity acquisitions, and effectively assumes that Varsity has no market power in 2014, the first date for which he analyses an acquisition. This assumption is untested, and is inconsistent the Plaintiffs' alleged theories.[138] I analyzed the eight Varsity acquisitions from 2014-2018, identified competitive harm from these acquisitions, and reasoned that the prior acquisitions created the market dynamics in which "Varsity's market power was already, at the beginning of the Class Period (December 10, 2016 to present), uncompetitively high."[139] Dr. Murphy, by comparison, only analyzed six of the eight acquisitions from 2014-2018 (he did not recognize Varsity's acquisition of Cheer Ltd. in 2014 and did not include Varsity's acquisition of JamBrands in 2015 in his analysis).[140] His testimony ties together two opinions: first, he claims to find no competitive harm from the six acquisitions he analyzed; and second, since he found no competitive harm from these six acquisitions, he then asserts without support that none of the previous 13 acquisitions would have competitive harm either.[141]

197. This logical implication is flawed as a matter of both logic and economics. Notably, as I opine in my first report, Varsity's acquisitions through 2014 (and certainly through 2016) allowed Varsity to acquire a dominant market position, and Varsity exploited this market power by charging monopolist prices as early as 2014 (and certainly by 2016).[142] Once Varsity is pricing at monopolist price levels, any further acquisitions would not lead to any

[137] Heeb Report, ¶ 108, note 99 ("If the market is already in a state of supra-competitive prices because of existing market power, it may not be profitable to raise prices even higher than the already monopoly price. This observation is known known as the Cellophane fallacy, from the case in which a monopolist was already pricing at the profit-maximizing monopoly price, and hence could not profitably raise its price any higher. (internal citations omitted) This observation is important in this current case, as Varsity already had substantial monopoly power as of December 10, 2016 (the start of the Class Period).").

[138] See Complaint, Section VII.A.4.b ("Varsity has acquired monopoly power in the cheer competition market by acquiring or impairing rival promoters" and then describing acquisitions in 2004, 2011, 2012, 2014, 2015, 2016, and 2017).

[139] Heeb Report, ¶¶ 278-286; Tables 19 and 20; ¶ 54.

[140] Murphy Report, Exhibits 45 and 52.

[141] Murphy Deposition, November 3, 2022, 126:25-127:9 ("The economics of those earlier acquisitions are part of the Varsity market position that they had at the beginning of the [Class] period. So if they had an effect on competition, that would happen – show up during that period that I look at as well."); Murphy Deposition, November 3, 2022, 127:10-128:6 ("if those acquisitions had diminished Varsity's incentive or ability to expand output and benefit consumers, that would show up in the period I look at, too.").

[142] Heeb Report, ¶ 54 ("Whereas Varsity's market power was already, at the beginning of the Class Period (December 10, 2016 to present), uncompetitively high, this [anticompetitive acquisitions of competitors] conduct also sustained, preserved and extended that monopoly power.").

further real price increase for the competitions it already owns (legacy events). At the monopolist price levels, Varsity has maximized monopolist profits, and any further increase in real prices would decrease, and not increase, profits.[143] Moreover, Varsity does increase the price of events that it acquires from their pre-acquisition competitive levels to higher price levels on par with its already inflated legacy event prices (see Table 1). In addition, Varsity's legacy events are already priced at a substantial premium relative to the competitive benchmark established by pre-acquisition pricing of acquired events (see Table 24).

198. Therefore, Dr. Murphy's finding that the real prices of Varsity's legacy events did not rise coincident with any of the six acquisitions that he considered is entirely consistent with my opinion that Varsity had established market power and charged monopoly or near monopoly prices by 2016. This market power was acquired through anticompetitive acquisitions of competitors, starting as early as 2004 (see Table 32 for a summary of all Varsity acquisitions from 2004-2018). The fact that these were at the monopoly levels is demonstrated by the comparison of pre- and post-acquisition pricing, as well as analysis of Varsity market power at local levels, the estimated monopoly pricing premium, and the effects of other conduct, including predatory conditional rebate programs.

199. Given the importance of the pre-2016 acquisitions, which created the competitive conditions in place for the 2016-2018 acquisitions examined by Dr. Murphy, I provide additional information about the pre-2014 acquisitions that I did not previously address in my first report. Table 32 includes a summary of the descriptive information for each Varsity acquisition of a rival event producers from 2004-2018. This includes the eight acquisitions from 2014-2018 that I previously analyzed and an additional 11 acquisitions from 2004-2012 that I have since analyzed in response to Dr. Murphy's conceptual theory of harm. Table 33 lists all the World Bids Events that Varsity acquired with those acquisitions summarized in Table 32. As evidenced in Table 33, Varsity acquired 15 World Bids Events in the eight acquisitions that I analyzed from 2014-2018 (out of a total of 42 World Bids Events starting with the 2013-2014 season); and acquired 12 World Bids Events in the 11 acquisitions from

[143] Heeb Report, ¶ 108, note 99 ("If the market is already in a state of supra-competitive prices because of existing market power, it may not be profitable to raise prices even higher than the already monopoly price. This observation is known known as the Cellophane fallacy, from the case in which a monopolist was already pricing at the profit-maximizing monopoly price, and hence could not profitably raise its price any higher. (internal citations omitted) This observation is important in this current case, as Varsity already had substantial monopoly power as of December 10, 2016 (the start of the Class Period).").

2004-2012. These acquisitions account for 27 of the 33 World Bids Events (equal to 82%) that Varsity owned and operated starting with the 2018-2019 season (see Table 51).

200. The fact that Varsity already had monopoly power prior to these most recent acquisition, and therefore would not have raised the price of its legacy events in response does not mean there was no price effect from these acquisitions. I have analyzed and reported that Varsity raised the prices of the acquired events from their pre-acquisition competitive benchmark prices up to new levels consistent with the supra-competitive pricing of Varsity's legacy events. Varsity also discontinued some acquired events, and opened new events branded with the acquired brand, at prices that were higher than the discontinued events (see Table 36).

201. Regarding camps, Dr. Murphy claims, "Dr. Heeb has provided no evidence or analysis that Varsity has a 'dominant' share of any camps market—local, regional, or national. Dr. Heeb has not considered the presence of other camp providers, nor has he analyzed the distances by which consumers travel to these camps. In any event, the estimates of market share that he cites are national and do not provide a basis to assume that shares are the same in every region."[144]

202. Dr. Murphy's statement is incorrect. As I demonstrated in my previous report, a Varsity presentation from May 2018 ranks Varsity "#1 Market Position" for the cheer camps markets.[145] The same Varsity presentation provides key competitors in the cheer camps markets: The Spirit Consultants, B2 Cheer & Dance, ACE gym, Cheer Ohio, Super CDA, and Pro Action Dance as its key competitors.[146]

203. Varsity's strategy to protect market share and combat competition from local gyms and schools is to "[d]evelop mutually beneficial partnership program with leading gyms to discourage them from providing summer camp for school teams"; to "[i]nvestigate Summer All Star League for All Star Gyms to supplant summer camp activity";[147] and to "[p]rovide reduced cost access to Slingshot program in exchange for exiting summer camp business."[148]

204. Varsity identifies the Spirit Consultants as a key competitor in the camp market for schools.[149] On their website, the Spirit Consultants promote overnight resort camps in

[144] Murphy Report, ¶ 204 (internal citations omitted).
[145] VAR00009293, at -297. See also Heeb Report, note 168.
[146] VAR00009293, at -297.
[147] VAR00173102, at -103.
[148] VAR00173102, at -103.
[149] VAR00009293, at -297.

Arizona and California, including a 2-day and a 3-day option in Arizona and a 3-day option in California.[150] The Spirit Consultants also offer a home camp option, with the ability to schedule a 1-day, 2-day, or 3-day home camp.[151]

205. By contrast, Varsity documents state that Varsity sponsored more than 5,700 camps annually in 50 states and Varsity's website states they are the largest camp operators in the world.[152]

206. Varsity also identifies Cheer Ohio as a key competitor in the camp market for schools.[153] Cheer Ohio are summer cheerleading camps hosted by the Ohio Association of Secondary School Administrators.[154] For 2022, they are offering 4 camps.[155] This is again tiny compared to the 5,700 + camps Varsity sponsors.[156]

207. Varsity also identifies Super CDA as a key competitor in the camp market for schools.[157] According to their website, Super CDA offers overnight camps, private camps at the schools, and mini camps at their training facility.[158]All their camps are only available in Illinois. To reiterate, Varsity sponsors 5,700 camps in 50 states.[159]

208. In his report, Dr. Murphy also identifies competitors to Varsity in the cheer camps markets.[160]

209. Dr. Murphy identifies Nfinity's Skills Academy Brand as a Varsity competitor.[161] On their website, the registration is for summer 2021 and has not been updated for the coming summer.[162] Additionally, Varsity does not list Nfinity as a competitor in the cheer camps markets.[163]

210. Dr. Murphy identifies JAMZ as a competitor in the cheer camps markets.[164] On their website, JAMZ lists 11 camps all in California from the summer of 2022.[165] In 2019, Varsity had over

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[150] The Spirit Consultants, "Camps," accessed Nov. 27, 2022, available at: https://thespiritconsultants.com/camp/.
[151] Available at: https://thespiritconsultants.com/camp/.
[152] VAR00424538, at -544-545; Varsity Camp Brands, accessed Nov. 17, 2022, available at: https://www.varsity.com/school/camps/brands/.
[153] VAR00009293, at -297.
[154] Cheer Ohio Website, accessed Nov. 17, 2022, available at: https://oassa.org/cheer-ohio/.
[155] Cheer Ohio Website, accessed Nov. 17, 2022, available at: https://oassa.org/cheer-ohio/.
[156] VAR00424538, at -544-545.
[157] VAR00009293, at -297.
[158] Super CDA, "Camps", accessed Nov. 17, 2022, available at: https://www.supercda.com/camps-clinics.
[159] VAR00424538, at -544-545.
[160] Murphy Report, ¶ 136 (internal citations omitted).
[161] Murphy Report, ¶ 136 (internal citations omitted).
[162] Nfinity Special Programs, accessed Nov. 17, 2022, available at: https://www.nfinity.com/pages/special-programs
[163] VAR00009293, at -297.
[164] Murphy Report, ¶ 136 (internal citations omitted).
[165] JAMZ Camps, accessed Nov. 17, 2022, available at: https://www.jamz.com/camps

29,000 camp participants in California alone.[166] Varsity does not list JAMZ as a competitor in the cheer camps markets.[167]

211. Dr. Murphy identifies World Class Cheerleading (WCC) as a competitor in the cheer camps markets as a company "offer[ing] a similar variety of camp formats as Varsity, including home camps and a resort camp in Palm Springs, California."[168] In 2019, Varsity hosted over 9,000 camp participants in their resort camps in California.[169] Varsity does not list WCC as a competitor in the cheer camps markets.[170]

212. Dr. Murphy identifies Elite Cheer as a competitor in the cheer camps markets.[171] Dr. Murphy correctly states that Elite Cheer "advertises itself as 'the USA's original and largest private cheer camp organization'."[172] However, Varsity does not identify Elite Cheer as a competitor in the cheer camps markets.[173]

213. These examples demonstrate a sample of identified competitors throughout the country and illustrate Varsity's enormous size advantage in those same geographies, even when compared to its notable rivals. These comparisons are consistent with Varsity's self-description as holding the "#1 Market Position".

IV.A.10. All Categories of Cheer Competition Apparel Are in the Same Relevant Product Market

214. Dr. Murphy states, "Plaintiffs' experts … provide no valid economic basis for such a broad [cheer apparel] market. Clearly, uniforms are not a functional substitute for shoes, nor are accessories like pom-poms a functional substitute for warm-ups or shoes. These product categories fail the most basic test of relevant market definition: that is, there is no technical ability to substitute across these categories."[174]

215. The critique, as I understand it, from Dr. Murphy is that each of the six apparel categories could (or should) be a distinct relevant product market. Dr. Murphy's critique is unsupported

[166] VAR00462074-79.
[167] VAR00009293, at -297.
[168] Murphy Report, ¶ 136 (internal citations omitted)
[169] VAR00462074-79.
[170] VAR00009293, at -297.
[171] Murphy Report, ¶ 136 (internal citations omitted).
[172] Murphy Report, ¶ 136 (internal citations omitted). See also Elite Cheer Why Elite, accessed Nov. 17, 2022, available at: http://elitecheerleading.com/why-elite/
[173] VAR00009293, at -297.
[174] Murphy Report, ¶ 206 (internal citations omitted).

by evidence. My opinion of a single relevant product market is supported by three facts from the evidence in this case. First, Varsity's apparel customers typically and often bundle cheer apparel across the six cheer apparel categories identified by Varsity.[175] For example, more than 70% of Varsity revenue is from customers who purchase from at least five of the six cheer apparel categories, and more than 96% of revenue is from customers who purchase at least three categories of apparel.[176] Dr. Murphy calls out shoes as an example of a category that, in his opinion, must face substantial competition from generalist competitors.[177] The evidence (and the deposition testimony that he cites as the only basis) contradicts his opinion.[178] Of customers that purchase from at least three categories of apparel, who constitute 96% of Varsity's revenue, 85% of these customers purchase shoes.[179]

216. Second, purchasing decisions are coordinated by the teams, such that the decisions are appropriately analyzed at the level of an All-Star gym or a school. With these two facts, All-Star gyms and schools can substitute away from high-quality cheer competition shoes to high-quality uniforms (opting instead for low-quality cheer competition shoes), since the overall budget constraint implies that All-Star gyms and schools can only afford one or the other. Third, Varsity's market power is common across all six apparel categories, both in terms of its share of total revenues in those product spaces and in terms of Varsity's

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[175] Heeb Report, Tables 6 and 7.

[176] Heeb Report, Table 6 (the fraction of revenue for customers purchasing in 5 or 6 categories equals 42.2% (5 categories) + 28.2% (6 categories) = 70.4%; the fraction of customers purchasing in 3, 4, 5, or 6 categories equals 8.4% (3 categories) + 17.6% (4 categories) + 42.2% (5 categories) + 28.2% (6 categories) = 96.5%).

[177] Murphy Report, ¶ 87, note 144. Dr. Murphy's own citation for this statement, at footnote 144 does not support this statement. See Deposition of David Hanbery, April 18, 2022, 272:8-273:11 ("Q. And you mentioned warm-ups, which I understand might be separate from a cheerleading uniform. Would parents go out and buy their own warm-up clothing for their children? A. Like specific to the gym or -- Q. Well, I think you mentioned that a lot of times you would not include warm-ups in -- in an apparel package that -- A. Yes. … Q. Where would they get their warm-up clothes? A. In the Deep South, there's about two months that we wear warm-ups, so we didn't require that. So, yeah, they would just wear whatever coat or jacket that they had to go. There's a lot -- I think now more the norm is they -- you know, they outfit their kids in everything, top to bottom: shoes and backpacks and bows and warm-ups. We -- we didn't do at all of -- you know, all of our locations, maybe one or two teams that were at upper level, or -- Worlds, USASF Worlds teams, would probably have little bit more dress-alike stuff because they wanted it, and the parents and the coaches would be in charge of putting that together and ordering it."); Webb Dep. Tr. (Vol. I) 87:22-88:14 ("Q. …The All Star athletes, they don't just wear sort of something that they go buy a Dick's Sporting Goods. They wear apparel and uniforms that are specifically created for All Star athletes at All Star competitions, correct? … A. It depends on which level. If you're talking about at the rec level, All Star rec level, many times they do wear more basic type of outfits that they could get at Dick's Sporting Goods or online through Amazon. You know, when you get into the larger gyms that are probably more established and more organized, they would typically have kind of their own uniform. They would pick which uniform they want to wear.")

[178] Ibid.

[179] Heeb Report, Tables 6 and 7.

foreclosure of rival apparel companies based on its market power in the complementary cheer competitions and cheer camps markets.

217. Thus, purchases in one apparel category are linked to purchases in another apparel category. They are part of the overall cheer competition apparel spending decision by an All-Star gym or a school, both in terms of vendors, timing of purchases, and price considerations. As a technical matter, if each of the six apparel categories is defined as its own relevant product market, the analysis of competitive harm would proceed identically as in my first report.[180] Thus, it is irrelevant, as a technical matter, whether there is a single cheer apparel market, for the purposes of evaluating the claims of competitive harm and common impact across the Class; or whether there are six distinct cheer apparel markets, one for each of the six apparel categories identified by Varsity. Competitive harm is still established for each of the six distinct cheer apparel markets, and the common impact of Varsity's anticompetitive conduct is still established for all Class Members that purchased cheer apparel from Varsity during the Class Period. Further, my opinions concerning the overcharge estimated for cheer competition shoes and the use of this empirical estimate to estimate the lower bound for the overcharge in the other five cheer apparel categories are established and remain unchanged with this technical definition of six distinct cheer apparel markets.[181]

218. Dr. Murphy writes, "any reasonable application of the HMT adopted by Dr. Heeb for his assessment of the relevant markets for analyzing apparel-related claims shows that the relevant market is narrower than the 'Cheer Apparel Market' alleged by Plaintiffs."[182] Dr. Murphy writes further, "[u]sed in this way, the HMT loses its ability to appropriately limit the scope of inquiry to include only those products and the geographic areas that are relevant to the analysis."[183]

219. Dr. Murphy does not offer an opinion as to the parameters of the narrow market for cheer apparel that he has in mind when he makes this critique. In his testimony, Dr. Murphy opines

[180] Heeb Report, ¶¶ 300-307, Tables 23 and 24.

[181] Heeb Report, Tables 23 and 24; ¶¶ 306-307 ("The monopolist has an incentive to put a smaller fraction of the total overcharge onto the most price sensitive product, so the estimate of the overcharge for shoes is likely a good estimate of a lower bound for the overcharges on the other two most purchase product categories (uniforms and lettering), and therefore also for the apparel market as a whole.").

[182] Murphy Report, ¶ 207 (internal citations omitted).

[183] Murphy Report, ¶ 207 (internal citations omitted).

that "[t]hings don't have to be identical to be in the same market."[184] He further concedes that shoes with different colors are probably in the same market.[185] I analyzed in extensive detail the quantitative evidence of customer bundling cheer apparel in my first report. In particular, the relevant empirical facts are that 96.4% of Varsity's apparel customers purchase products from at least three categories and of those customers, 98% of them are purchasing uniforms, 99% of them are purchasing lettering, and 86% of them are purchasing shoes, which are the three largest categories of cheer apparel and account for 78% of Varsity's revenue across its six categories of products.[186] Based on that evidence, I concluded that "[c]heer apparel is broadly defined as clothing used during cheer competitions by cheer athletes" and that such "cheer apparel is a proper antitrust product market."[187]

220. Dr. Murphy writes, "[i]f one starts with a narrow candidate product market than the Cheer Apparel Market asserted by Plaintiffs and adopted without analysis by their experts, then the same logic used by Plaintiffs' experts to support their broad market definition leads to the conclusion that the relevant markets are narrower."[188] Dr. Murphy continues later in the paragraph, "I cannot rule out, as Dr. Heeb rules out without evidence, that apparel customers would substitute from cheer shoes to general purpose athletic shoes."[189]

221. Dr. Murphy does not acknowledge that certain shoes are required by competition rules for athletes to compete in cheer competitions. According to USASF regulations governing competitions: "Soft-soled shoes must be worn while competing. No dance shoes/boots, and/or gymnastics slippers (or similar) allowed. Shoes must have a solid sole."[190] A "general purpose athletic shoe" as considered by Dr. Murphy may not be permitted. Moreover, so that all team members have matching apparel and to allow judges to easily see the positioning of athletes' feet, most athletes wear all-white cheer competition shoes. These cheer competition shoes are distinct from the shoes that an athlete might wear for practice or warm-up. It is

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[184] Murphy Deposition, November 4, 2022, 115:12-23 ("things don't have to be identical to be in the same market.").
[185] Murphy Deposition, November 4, 2022, 117:15-118:7.
[186] Heeb Report, ¶¶ 153-162; Tables 5, 6, and 7.
[187] Heeb Report, ¶¶ 158, 162
[188] Murphy Report, ¶ 208 (internal citations omitted).
[189] Murphy Report, ¶ 208 (internal citations omitted).
[190] VAR00247460, at -473.

these cheer competition shoes that are included in my definition of cheer apparel.[191]

222. Dr. Murphy writes, "Dr. Heeb and Dr. Netz never consider candidate markets at the category or narrower levels. Therefore, their conclusion that the market is broader than these categories is not valid, given that the HMT framework can never find smaller relevant markets than its starting point."[192]

223. There are six categories of cheer apparel identified by Varsity from its own data and its own documents: uniforms, shoes, lettering, warmups, camp wear, and accessories.[193] Dr. Murphy's backup materials cite to two Varsity spreadsheets that identify the exact same apparel categories, confirming that Dr. Murphy himself recognizes these same apparel categories and uses them as the basis for all his apparel analysis.[194] I don't believe Dr. Murphy is arguing that "shoes" should be partitioned into more than one relevant product market. The critique, as I understand it, from Dr. Murphy is that each of the six apparel categories could (or should) be a distinct relevant product market. When evaluating this critique, it is important to keep three facts in mind. As previously described, I analyzed in extensive detail the quantitative evidence of customer bundling cheer apparel. In particular, the relevant empirical facts are that the three largest categories of cheer apparel are uniforms, lettering, and shoes and these three categories comprise 78% of Varsity's revenue across its six categories of products; that 96.4% of Varsity's apparel customers purchase products from at least three categories; of those customers, there is more demonstrated substitution away from shoes (86% of customers purchasing from three or more categories purchase shoes) as compared to uniforms (98% of customers purchasing from three or more categories purchase uniforms) and lettering (99% of customers purchasing from three or more categories purchase shoes); and that therefore Varsity has the ability to extract larger monopolist rents on uniforms and letter (higher overcharge) relative to shoes.[195]

224. Dr. Murphy states, "many of Varsity's customers do not purchase all of their products from Varsity, which suggests that they are doing precisely what Dr. Heeb assumes they will not

[191] Heeb Report, ¶ 158 ("[c]heer apparel is broadly defined as clothing used during cheer competitions by cheer athletes.").
[192] Murphy Report, ¶ 208 (internal citations omitted).
[193] Heeb Report, ¶ 154 (citing JEFF00141901, at -952).
[194] Murphy Backup Materials; VAR00605765; VAR00605766. These Varsity data files use the term "Outerwear" instead of the term "Warmups" used by Varsity in its company documents that I cite to.
[195] Heeb Report, Tables 6 and 7.

and cannot do. And, likewise, cheer apparel products often are not purchased together as a set or at the same time."[196]

225. Dr. Murphy offers no support, either quantitative or qualitative, for his conclusion that "many of Varsity's customers do not purchase all of their products from Varsity."[197] Even if true, and I think the correct fact is that **some** "of Varsity's customers do not purchase all their products from Varsity," this statement is would not imply that these categories are not in the same product market.

226. Some of Varsity's customers in the cheer competitions markets attend non-Varsity events, meaning that they do not purchase all their cheer competition services from Varsity. This does not mean that the cheer competitions markets are not relevant product markets, only that there are other competitors in these markets. Further, Varsity's customers in the cheer competitions markets do not purchase entrance to all their competitions at the same time. Such purchases are spread out over the competition season, like how an apparel customer's purchases may be spread out over the entire year.

227. The cheer apparel market, as I defined it in my first report and as I define it here in this report, consists of different types of cheer competition apparel, including uniforms, shoes, lettering, warmups, camp wear, and accessories. Dr. Murphy's argues, considering my definition, that these different products can only be in the same relevant product market if apparel customers purchase all the categories at the exact same time. This is inconsistent with economists' application of market definition.

228. I analyzed in extensive detail the quantitative evidence of customer bundling cheer apparel across the six cheer apparel categories identified by Varsity.[198] Given that all the different products in the cheer apparel market, across the six cheer apparel categories, are used for cheer competitions by cheer athletes, then this provides evidence under the *Brown Shoe* framework that all such cheer competition products are properly considered in the same relevant product market. Based on the bundling evidence and my analysis of the Brown Shoe *indicia*, I conclude, as I did in my first report, that "[c]heer apparel is broadly defined as clothing used during cheer competitions by cheer athletes" and that such "cheer apparel is a

[196] Murphy Report, ¶ 210 (internal citations omitted).
[197] Murphy Report, ¶ 210.
[198] Heeb Report, ¶¶ 153-162; Tables 5, 6, and 7.

proper antitrust product market."[199]

IV.A.11. The Relevant Geographic Markets for Cheer Competitions and Cheer Camps are Regional and these Definitions are Confirmed by Empirical Analysis of Competition at the Local (CSA) Level

229. Dr. Murphy states, "the claim that the existence of market power in multiple relevant geographic areas justifies the adoption of a national market is flawed. To reiterate, even if a firm has market power in several, or many, or all geographic areas, this in no way implies that the relevant market for the analysis of competitive effects is the union of these geographic areas."[200]

230. Dr. Murphy misunderstands the assignment. I opined in my first report that the relevant geographic markets are regional, specifically the five regions that USASF uses to organize its business operations.[201] Within those five relevant geographic markets, I identified competitive harm, confirmed that Varsity's conduct was common across all five geographic markets and the effects of such conduct was common to all Class Members across the five geographic markets, and verified that no more than a *de minimus* fraction of all Class Members in each of the five geographic markets was uninjured.[202]

231. My empirical analysis first calculated overcharges for each of the five geographic regions, and from that analysis I concluded both that the overcharges were statistically significant (positive and statistically different from 0), and that the overcharges were ***not*** statistically different across regions.[203] In other words, as a statistical matter, the empirical evidence did not allow me to conclude that the regional overcharges were different from one region to the next. Thus, the regional overcharges were indistinguishable (statistically). In terms of antitrust injury resulting from Varsity's conduct, the following are equivalent: (1) Class

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[199] Heeb Report, ¶¶ 158, 162.
[200] Murphy Report, ¶ 212 (internal citations omitted).
[201] Heeb Report, ¶¶ 139-140 ("That there is a cost of travel implies that there is a limit to how far teams may travel to avoid a price increase in event entry fees imposed by a monopolist. Cheer teams may routinely travel hundreds of miles to attend a competition. They may travel to various parts of the United States to participate in important events, such as the World or the Summit competitions, but would not routinely do so to attend regular season events. Therefore, events that were further away than this distance would not compete on price with each other, unless there were other events located between them that competed with both and effectively conveyed the competitive effect beyond the travel radius of an individual team. Thus, as a technical matter, the relevant geographic market for antitrust purposes is smaller than national, and larger than local communities. Hence it is regional.")
[202] Heeb Report, ¶¶ 278-316.
[203] Heeb Report, Tables 21 and 22.

Members in each of the relevant geographic regions suffer harm from a Varsity overcharge estimated separately by region, and the region-specific overcharges are indistinguishable from one another; and (2) Class Members in each of the relevant geographic regions suffer harm from a Varsity overcharge estimated at the national level (that is indistinguishable from the region-specific overcharges). Given the statistical evidence, it is mathematical equivalent to calculate damages at the level of the regional geographic markets using the national overcharge estimate.

232. Dr. Murphy writes, "Dr. Heeb claims that although prices are set locally, Varsity's pricing strategy is determined, administered, and set at a national level. This assertion does not justify a national market, however. First, geographic market is determined based on where consumers in a particular area can turn for supply. Second, contrary to Dr. Heeb's assertion, if a firm's pricing strategy is to allow local offices to respond to local market economic conditions, then this is economic evidence that the relevant markets for analyzing prices and the effects on price of the alleged conduct are local, even if these locally driven prices have to be approved by the head office or are driven by common factors such as costs across geographies."[204]

233. Dr. Murphy fails to quote the full opinion from my first report, in which I wrote that: "Although prices are set locally, Varsity's pricing strategy is determined, administered, and set at a national level and implemented locally."[205] I did not opine that the relevant geographic market is national; I opined in my first report that the relevant geographic markets are regional.[206] On a different issue, I do claim that the impact of Varsity's conduct is common across the geographic markets and that a national overcharge can be applied for the purposes of calculating antitrust injury for Class Members.[207]

[204] Murphy Report, ¶ 213 (internal citations omitted).
[205] Heeb Report, ¶ 144.
[206] Heeb Report, ¶¶ 139-140 ("That there is a cost of travel implies that there is a limit to how far teams may travel to avoid a price increase in event entry fees imposed by a monopolist. Cheer teams may routinely travel hundreds of miles to attend a competition. They may travel to various parts of the United States to participate in important events, such as the World or the Summit competitions, but would not routinely do so to attend regular season events. Therefore, events that were further away than this distance would not compete on price with each other, unless there were other events located between them that competed with both and effectively conveyed the competitive effect beyond the travel radius of an individual team. Thus, as a technical matter, the relevant geographic market for antitrust purposes is smaller than national, and larger than local communities. Hence it is regional.")
[207] Heeb Report, ¶ 144 ("Varsity's impact on competitive cheer event prices is best estimated as a common overcharge throughout the country.").

234. First, I agree that market definition is based on evidence of customer substitution patterns and consistent with Dr. Murphy's statement about "where consumers in a particular area can turn for supply."[208] This is the relevant information for market definition, consistent with both the Hypothetical Monopolist Test that I apply and the *Brown Shoe* indicia that I consider in my analysis. I use that information and determine that there are five relevant geographic markets based on the regions used by USASF to organize its business operations.[209] However, the opinions that Dr. Murphy cites are my opinions with respect to the common impact of Varsity's conduct across the Class Members.[210] These are two distinct issues, and Dr. Murphy does not address the latter issue and offers no opinions or calculations related to this latter issue in either his expert report or in his deposition testimony.

235. Second, Dr. Murphy's argument that the ability of "local offices to respond to local market economic conditions" is dispositive for market definition ignores the point he made just one sentence prior ("geographic market is determined based on where consumers in a particular area can turn for supply").[211] Dr. Murphy cannot have it both ways. His statement about "where consumers in a particular area can turn for supply" is accurate, as market definition is determined based on evidence of customer substitution patterns.[212] For "local offices" responding to "local market conditions" to impact market definition, Dr. Murphy would need to identify evidence that such local responses occurred and evidence that such responses significantly affected the availability of meaningful substitutes for consumers in a geographic area such that a hypothetical monopolist would be able to profitably implement a price increase of more than 10% within that local geographic area. He performed no empirical analysis capable of answering those questions and has no evidence to support his argument. My own analysis, on the other hand, of the competitive impact of Varsity's conduct at the local level, specifically at the level of a CSA, corroborates my opinion that the relevant geographic markets are regional.[213]

236. Dr. Murphy writes, "Dr. Heeb claims that his econometric analysis of pricing confirms his

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[208] Murphy Report, ¶ 213.
[209] Heeb Report, ¶ 140.
[210] Heeb Report, ¶ 144 ("Varsity's impact on competitive cheer event prices is best estimated as a common overcharge throughout the country.").
[211] Murphy Report, ¶ 213.
[212] Murphy Report, ¶ 213.
[213] Heeb Report, ¶¶ 141-144; ¶¶ 313-316; ¶¶ 327-331; Table 27.

conclusion that prices were determined by a common price structure and claims this in turn confirms his assertion of a single national market for all cheer competitions. Again, he ignores the fundamental point that market definition is determined by the choices available to customers, not by a seller's business strategy."[214]

237. Again, I agree that market definition is based on evidence of customer substitution patterns and consistent with Dr. Murphy's statement about "choices available to customers."[215] This is the relevant information for market definition. I use that information and determine that there are five relevant geographic markets based on the regions used by USASF to organize its operations.[216] However, the opinions that Dr. Murphy cites are my opinions with respect to the common impact of Varsity's conduct across the Class Members.[217] Dr. Murphy nowhere in his expert report or his deposition testimony offers analysis or opinions relates to Class-wide impact, a necessary analysis for class certification.

238. Dr. Murphy further contends, "Dr. Heeb's comparisons of Varsity's purported market shares between Combined Statistical Areas ('CSAs') and their surrounding regions does not corroborate his purported national market."[218] He then continues by identifying what he claims are flaws with my CSA analysis.[219]

239. Dr. Murphy appears to misunderstand the analysis and misrepresents the purpose and conclusions from my CSA analysis. First, the CSA analysis is based on variations in Varsity event attendance across CSAs in which Varsity organized competitions. The relevant statistical variable is the variation in attendance at Varsity events across CSAs. Attendance at events sponsored by producers other than Varsity is not observed. However, an estimate of the relative number of such participants at non-Varsity can be inferred at the regional level from the relative event-count market shares of World Bid Events in each region. From this, I derive the total number of All Star participants in the region and assume that the number of total participants in each CSA and/or MSA, as a fraction of the population of that CSA/MSA is the same throughout the region. Since I then know the expected number of total

[214] Murphy Report, ¶ 214 (internal citations omitted).
[215] Murphy Report, ¶ 214.
[216] Heeb Report, ¶ 140.
[217] Heeb Report, ¶ 144 ("Varsity's impact on competitive cheer event prices is best estimated as a common overcharge throughout the country.").
[218] Murphy Report, ¶ 215.
[219] Murphy Report, ¶ 215.

participants in each CSA/MSA and I know that actual number of Varsity participants, I can derive the market shares for Varsity and number of non-Varsity participant in each area. I denote the Varsity market shares estimated this was as "Implied Market Share" or occasionally "Effective Market Share". The estimate is derived ultimately from Varsity have more or fewer than its expected number of participants, given the population of the MSA/CSA.

240. Second, the competitive impact of the variations in attendance is reported relative to Varsity's benchmark All-Star competition market share in each geographic market (each region). Varsity's benchmark All-Star competition market share in each region is mathematically defined as the weighted average of the local revenue shares, with proper weights applied based on CSA size. Thus, some CSAs will have revenue shares higher than Varsity's benchmark market share, and some will have revenue shares lower than the benchmark.

241. Due to the lack of abundant market share data, a fact that Dr. Murphy himself laments and uses to justify his inability to calculate a market share,[220] particularly at the region-level at which the relevant geographic markets are defined, I estimate the All-Star competition regional market shares as being no smaller than the event count regional market shares for World Bids Events. To justify this approach, I consider two facts. First, Varsity's event count market share for any set of events understates its revenue market share for that same set of events, because Varsity charges more for its events and operates events with more participants.[221] Second, the number of World Bids Events operated by large event producers, including Varsity and the eight event producers it acquired from 2014-2018, are closely correlated both in the data and in company documents with the overall size (scale of operations) and revenues of an event producer.[222] Therefore, the event count regional market shares for World Bids Events would be an estimate of the lower bound for the All-Star competition regional market shares that I use as inputs in my CSA analysis. Dr. Murphy's critiques are misplaced.

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[220] Murphy Deposition, November 4, 2022, 138:5-8 ("I don't believe I had the data necessary to calculate such market shares.").

[221] As described in my opening report, a 56.2% event count market share increases to a revenue market share of 76.2% if Varsity events have twice as many participants and are priced 25% higher than competitors. See Heeb Report, ¶ 178.

[222] See Varsity due diligence documents as cited for the acquisitions since 2014 in Table 32.

242. Third, and finally, I do not opine that "a firm's market share alone is" "dispositive."[223] I refer to Varsity's market shares in the context of the market concentration measures HHI and change in HHI for the Varsity acquisitions from 2014-2018.[224] Market share and concentration evidence, as described by the DOJ and the FTC in their joint Horizontal Merger Guidelines, is "often one useful indicator of likely competitive effects of a merger" and that the "purpose of [market concentration] thresholds is not to provide a rigid screen to separate competitively benign mergers from anticompetitive ones … [but] … [r]ather, they provide one way to identify some mergers unlikely to raise competitive concerns and some others for which it is particularly important to examine whether other competitive factors confirm, reinforce, or counteract the potentially harmful effects of increased concentration."[225]

243. The market concentrations that I calculate (HHIs) and apply under the Horizontal Merger Guidelines are based only on the market share for Varsity. As such, the market concentrations are calculated as if all other competitors in the market are atomistic, meaning that they are so small as to be irrelevant in the HHI calculation.[226] If the market contains non-atomistic competitors (other than Varsity), then market concentrations would increase, which would raise further concern (under the Horizontal Merger Guidelines) about Varsity's dominant market position, the degree of concentration in each of the regional markets, and the extend of Varsity's market power.

244. Dr. Murphy, despite conducting eight interviews with Varsity senior executives, did not calculate Varsity's market share in his expert report or offer any opinions on the size of Varsity's market share in his deposition testimony.[227] He further testified that he asked Varsity for additional information from the company to make such a market share

[223] Murphy Report, ¶ 215.
[224] Heeb Report, ¶¶ 178-180; Table 12.
[225] Heeb Report, ¶ 180, note 203; Table 12 (citing DOJ/FTC Horizontal Merger Guidelines); U.S. Department of Justice and Federal Trade Commission, "Horizontal Merger Guidelines," Issued: August 19, 2010, at §5.3.
[226] Heeb Report, Table 12. I calculated end-of-season HHIs equal to 1,798 after the 2015-2016 season, 1,575 after the 2016-2017 season, and 3,158 after the 2017-2018 season. For example, the presence of a competitor with 5% market share would increase the end-of-season HHIs by 25 points, and the presence of four competitors with 5% market share would increase the end-of-season HHIs by 100 points. Accounting for non-atomistic competitors in the market would lead to each of the three 2017-2018 acquisitions with a post-acquisition HHI that exceeds the DOJ/FTC threshold for a "Highly Concentrated Market": Nov. 2017 acquisition of CSG; Dec. 2017 acquisition of MGS; and Jan. 2018 acquisition of EPIC.
[227] Murphy Report, Materials Relied Upon; Murphy Deposition, November 4, 2022, 138:5-25.

calculation, but apparently the company never produced the data.[228] Thus, not only does Dr. Murphy argue that market shares are not "dispositive" and that other factors can additionally inform in an analysis of competitive harm, but moreover he assigns no value to market shares in his analysis and ignores all evidence produced in this litigation in which Varsity self-reports its own market shares, and disputes my reliance inferences from the only other source of complete quantitative information on non-Varsity competitor shares represented by the World Bid Shares.

IV.B. Monopoly Power and Competitive Effects

IV.B.1. Monopoly Power

245. The economic mechanisms used to evaluate the sustainability of a price cartel in a case alleging price-fixing claims against a price-fixing cartel are not fully applicable to evaluate the conspiracy to monopolize claims in this case against a dominant firm monopolizing relevant antitrust markets. In particular, the presence of substantial barriers to entry is not a prerequisite or necessary condition for anticompetitive effects and harm to competition for a conspiracy to monopolize claim, and I make no claims to that effect in my analysis.

246. Based on my analysis, I do find and describe substantial barriers to entry in the cheer competitions markets, the cheer apparel market, and the cheer camps markets. Yet, the barriers to entry are not infinitely large, and I do observe new entrants into these markets, particularly in recent years after the commencement of these antitrust litigations. Dr. Murphy, as I describe below, applies a concept of "barriers to entry" that is nonstandard for economists, and inconsistent with the academic literature that he himself cites.[229] By redefining the barriers to entry that I identify not as additional costs that new entrants must incur (relative to Varsity), which is the definition used by economists, but as standard costs of business, which has no foundation, Dr. Murphy does not analyze whether the barriers to entry that I identify have a substantial effect on the ability of new entrants to enter the

[228] Murphy Deposition, November 4, 2022, 139:1-11.

[229] Murphy Report, ¶ 219, note 355 ("[p]ut differently, it is a cost advantage that an incumbent enjoys vis-à-vis potential entrants" citing G. Stigler, "Barriers to entry economies of scale, and firm size," in: The Organization of Industry (Chicago and London: The University of Chicago Press, 1983), p. 67).

market.[230] While the barriers to entry are substantial and Dr. Murphy has provided no analysis to disprove that the barriers to entry that I have identified are substantial, the presence of such barriers is not a necessary condition for the finding of harm to competition in a monopolization case, as I detail in the paragraphs that follow.

247. In a price-fixing cartel, cartel members agree to restrict output. If the market output decreases, then the market price will increase. The only way to ensure that the cartel members' agreement to restrict output (i.e., to lower the cartel output) will lead to a reduction in market output is to ensure that significant barriers to entry prevent entry of a new company that can flood the market with the product and thus defeat the cartel's restrictions on output. Absent these significant barriers to entry, a price-fixing cartel is not sustainable, and no anticompetitive effects can occur.

248. The economics are substantively different for a conspiracy to monopolize case as compared to a price cartel case as previously described. Cartels consist of cartel members that each sell substantively similar products and the maintenance and enforcement of tacit of explicit collusive agreements requires that the cartel members agree on one form of conduct, and typically simple conduct, such as output restrictions. It is not possible to maintain or enforce collusive agreements across six or more distinct forms of conduct, as are often alleged in monopolization cases (including the present case).[231] With collusive agreements on a single form of conduct and cartel members selling substantively similar products, new entrants have

[230] Murphy Deposition, November 4, 2022, 205:7-206:4 ("A. I don't think that these would be elements that I would typically associate with barriers to entry, or that these create barriers to entry from an antitrust or economic sense. I think what they're talking about here is some of the assets these organizations have. In this case, Varsity, one of their assets is they have a network. The other is they offer a wide – they offer a scope – broad scope of products. And the third one is, at least according to their assessment, they seem to say they are enjoying some forms of economies of scale. I think what often gets missed is that there – you know, those aren't the only attributes that matter, and those aren't costless. … So, yeah, there are advantages. And these kinds of documents typically focus on advantages that a company has."); Id., 289:5-290:2 ("A. It doesn't necessary mean there would be an entry barrier even. It's just – you might have a comparative advantage because you combine various strengths. That doesn't make it an entry barrier. I mean, you can have firms that are – have particular strengths; they can have a particular combination of strengths. That doesn't make it into an entry barrier. You're just talking about some comparative advantage.")

[231] See Complaint, Section VII.B.1 ("Elements of Varsity's Exclusionary Scheme" include "1. Varsity and USASF Created a System of Bids for Admissions to National Tournaments as a Means to Funnel Athletes to Its Local and Regional Tournaments"; "2. Varsity and USASF Created Competition Rules That Deny Potential Competitors a Foothold in the Industry"; "3. Varsity Uses Exclusive Agreements with All-Star Gyms and Schools to Foreclose Access to the Relevant Markets"; "4. Varsity Forecloses Access to the Cheer Apparel Market"; "5. Varsity Leverages Its Monopoly Power in the Cheer Competition Market to Foreclose Competition in the Cheer Camp Market"; and "6. Varsity Counter-Programmed Rivals' Competitions.").

a strong incentive to enter the market (if they have the ability) as they would obtain high profits selling at the high market prices orchestrated by the cartel. However, the barriers to entry mean that new entrants do not have the ability to enter, or at least do not have the ability to enter with sustaining substantial losses in the short-term (due to fixed cost investments, for example). The cartel could then adjust its collusive agreement to prevent the new entrant from ever recouping its initial investment losses.

249. In a monopolization case, there is no coordination or collusive agreements that must be maintained and enforced across independent business entities. All decisions are made by a single company, the monopolist. Thus, the monopolist can implement many distinct forms of conduct as part of an overall scheme to exclude rivals, harm competition, and maintain monopoly power, and the distinct forms of conduct are designed as complementary in that their combined effects are worse (for consumers) and better (for the monopolist) than the sum of the conduct in isolation. In a monopolization case, new entrants may have more ability to enter the market (i.e., lower barriers to entry) as compared to new entrants in a market with a properly functioning cartel, but the incentives to enter might be substantially lower than for new entrants in a cartelized market. A new entrant could enter a monopolized market, but lack the customer relationships, supplier relationships, or sales channels necessary to ever obtain viability. This is particularly true if the monopolist's distinct forms of conduct involve leveraging its market power into related vertical markets in the supply chain. In short, the monopolist has a wealth of available conduct given its market power that can effectively drive a new entrant out of the market. Knowing this, potential entrants have little incentive to enter a monopolized market.

IV.B.2. Competitive Effects

250. Each of Varsity's anticompetitive conduct was exclusionary, but taken in the aggregate, the conduct was part of an overall scheme to exclude rivals, harm competition, and maintain Varsity's monopoly power, and the effects in combination were worse than the sum of their parts. Courts have found that proper economic analysis must "look at the whole picture and not merely at the individual figures in it."[232] Further, the Courts have found that the "evidence

[232] *Cont'l Ore Co. v. Union Carbide & Carbon Corp.,* 370 U.S. 690, 698–99 (1962) ("It is apparent from the foregoing that the Court of Appeals approached Continental's claims as if they were five completely separate

[Plaintiff] presented in this case regarding [Defendant's] exclusionary conduct must be considered in the context of [Plaintiff's] theory."[233] The Complaint filed by Plaintiffs in this case lists no fewer than six distinct forms of conduct that had the effect of excluding rivals from the relevant antitrust markets and harming competition.[234] In keeping with the relevant case law, my analysis of competitive effects considers the effects of all distinct forms of conduct in their totality, consistent with Plaintiffs' theory.

251. The distinct forms of Varsity conduct that I analyze, not in isolation but the totality of the competitive effects for all conduct, include: (1) Varsity's acquisition of its largest competitors in the cheer competitions markets; (2) Varsity's use of conditional rebates scheme to lock-in gyms (the decision-makers) and withhold rebates from the indirect purchasers (parents); and (3) Varsity exploitation of the relationships with venue operators and hotels to exclude rival event producers.

IV.B.2.a) Acquisitions

252. Varsity would preview rival event producers' upcoming season of events and counter-program what it called "attack events" in order put its rivals out of business and make them

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and unrelated lawsuits. We think this was improper. In cases such as this, plaintiffs should be given the full benefit of their proof without tightly compartmentalizing the various factual components and wiping the slate clean after scrutiny of each. '* * * (T)he character and effect of a conspiracy are not to be judged by dismembering it and viewing its separate parts, but only by looking at it as a whole. . . . and in a case like the one before us, the duty of the jury was to look at the whole picture and not merely at the individual figures in it.'").

[233] *Conwood Co., L.P. v. U.S. Tobacco Co.*, 290 F.3d 768 at -783 (6th Cir. 2002) ("[Defendant] contends that none of the practices [Plaintiff] complains of amount to antitrust violations, but are no more than isolated sporadic torts. We disagree. [Plaintiff] presented evidence that beginning in 1990 [Defendant] began a systematic effort to exclude competition from the [relevant antitrust] market. [Plaintiff] presented sufficient evidence that [Defendant] sought to achieve its goals of excluding competition and competitors' products by numerous avenues."); Id., at -787-788 ("The evidence [Plaintiff] presented in this case regarding [Defendant's] exclusionary conduct must be considered in the context of [Plaintiff's] theory. … There was ample documentary and testimonial evidence supporting this theory. The jury could have found, and apparently did find, that [Defendant's conduct] was exclusionary conduct without a sufficient justification, and that [Defendant] maintained its monopoly power by engaging in such conduct.").

[234] Complaint, Section VII.B.1 ("Elements of Varsity's Exclusionary Scheme" include "1. Varsity and USASF Created a System of Bids for Admissions to National Tournaments as a Means to Funnel Athletes to Its Local and Regional Tournaments"; "2. Varsity and USASF Created Competition Rules That Deny Potential Competitors a Foothold in the Industry"; "3. Varsity Uses Exclusive Agreements with All-Star Gyms and Schools to Foreclose Access to the Relevant Markets"; "4. Varsity Forecloses Access to the Cheer Apparel Market"; "5. Varsity Leverages Its Monopoly Power in the Cheer Competition Market to Foreclose Competition in the Cheer Camp Market"; and "6. Varsity Counter-Programmed Rivals' Competitions.").

easier to acquire.[235] The strategy of "attack events" was systematically organized by Varsity across its entire sales teams.[236] The company implemented "Competitor Tracking Instructions" for its sales team to systematically track the schedules of its competitors in order to implement its "attack events" strategy.[237] With this coordinated and systematic "attack events" strategy in place, the sales team was wildly successful in "the amount of events [Varsity] CRUSHED this season and that they had to cancel."[238]

253. When Varsity's apparel rival, GK Elite Sportswear, partnered with Varsity's cheer competition rival, Cheer Derby, Bill Seely and the executive team at Varsity requested its sales team to "have events on top of these Cheer Derby events."[239] The sales team identified "Varsity events that we currently have lined up that are around the same dates and regional locations as the 3 Cheer Derby competitions."[240] As a further example, Varsity set up events in the 2017-2018 season to go head-to-head with Mardi Gras Spirit events in Louisiana in order to reduce the participation at the "MARDI GRAS world bid Event in New Orleans on Jan 14 weekend" below the threshold for that event to retain its status as a World Bids

[235] Deposition of Jim Hill, March 21, 2022, 118:2-14 ("To – to your question of attack events to maybe affect somebody's decision, there's one in particular that I can recall where the previous owner, Tammy Van Vleet, GSSA, and – Golden State Spirit Association. And she made this comment directly to me – and this is years ago – but, you know, 'I didn't want to sell, but I had to. You know, you guys were coming and it was either sell and – and get something out of it, or you put me out of business,' was her – was her terminology and opinion of why she chose to sell to Varsity when she did.").

[236] VAR00318601 (Hill Exhibit 5), at -601 (email from Jim Hill to Brian Elza et al. (30+ recipients) on Aug. 28, 2013, "for the 'Attack Events' please reference the attached spreadsheet. I know there is a TON of info on it but I will explain on the sales call. Anything in Green is our event, Red is a JamBrands event, White is an IEP event. If you see a row highlighted in Orange that means this is a NEW event. Yellow means the event is no longer listed on the competitor brand website, so the assumption is the event no longer exists."); VAR00318604. JamBrands was Varsity's largest competitor at the time (Varsity acquired JamBrands in 2015) and the color "Red" seems to indicate increased urgency for the sales team to install "Attack Events" up against JamBrands events. See also VAR00318421 (Hill Exhibit 6), at -421 (email from Brian Elza to Jim Hill on Aug. 28, 2013, in response to the prior email, "In the past I feel like we have done a good job of identifying the, but not a great job of attacking them. We need to figure out what it will take to pull each customer away, then execute. I'd start with Fall events and then work your way up to Spring events. I don't think all the Advisors will figure this out on their own without your guidance.").

[237] VAR00320716 (Hill Exhibit 7).

[238] VAR00324040 (Hill Exhibit 8), at -040 (email from Joshua Johnson to Tres LeTard and Jim Hill, dated April 15, 2014, "Just thought you both would be interested in seeing the amount of events we CRUSHED this season and that they had to cancel." Mr. Johnson then listed 16 events that were cancelled in Texas and Colorado).

[239] VAR00190278 (Hill Exhibit 10), at -279 (email from Brian Elza to Kevin Brubaker, Jim Hill, and Tres LeTard with subject "FW: GK Elite Sportswear Partners with Cheer Derby" and dated Sept. 14, 2017, "Will you make sure we have events on top of these Cheer Derby events. Per Bill Seely. We may already have it covered.").

[240] VAR00190278 (Hill Exhibit 10), at -278 (email from Kevin Brubaker to Brian Elza, Tres LeTard, and Jim Hill in response to the previous email, "Below are the Varsity Events that we currently have lined up that are around the same dates and regional location as the 3 Cheer Derby competitions.").

Event.[241] Varsity went on to acquire Mardi Gras Spirit in December 2017 of that 2017-2018 season and subsequently cancelled the event that it had scheduled head-to-head with the Mardi Gras World Bids Events and "move all of those teams to MARDI GRAS."[242]

254. As an economic and practical matter, a firm stands to reduce its short-term profits by offering an event in the exact same location and at the exact same time as its competitor. The only way for the company to gain profit in the long-run is if the counter-programming forces the rival out of business and the company is able to gain new customers as a result.

255. Varsity acquired eight of its largest and closest competitors in the cheer competitions markets between 2014 and 2018 (see Table 32). This included JamBrands and Mardi Gras Spirit, two rival event producers that were explicitly targeted by Varsity's "attack events" strategy. Additionally, one of the acquisitions was Aloha (owner of the GSSA brand events) whose owner, Tammy Van Fleet, explained to Jim Hill, "I didn't want to sell, but I had to. You know, you guys were coming and it was either sell and – and get something out of it, or you put me out of business."[243] The "attack events" strategy was effective as it reduce the attendance at the competitor events, sometimes below thresholds that were required for the event to maintain its World Bids Event status, and reduced the revenue and profit for the competitor.

256. For some events, the "attack events" conduct combined with the final phase (acquisition) generated a time series for event participation in which the event participation decreased and was at low levels prior to acquisitions and then returned to pre-"attack event" levels post-acquisition. This is certainly evident in the data for the Mardi Gras Spirit World Bids Event called "Mardi Gras Extravaganza" taking place in New Orleans over Martin Luther King Jr.

[241] VAR00081435 (Hill Exhibit 11), at -435 (email from Brian Elza to John Nichols, Landon Craft, Tres LeTard, and Jim Hill dated Dec. 7, 2017, "As you know we often put events on other events in order to hurt our competitors. This past season we decided to put a JAM event in Baton Rouge to go head to head with MARDI GRAS world bid Event in New Orleans on Jan 14 weekend. Strategy worked and now Mardi Gras is sitting around 60 ish teams and JAM at 70. If MARDI GRAS doesn't hit 125 teams they lose their Tier 1 status.").

[242] VAR00081435 (Hill Exhibit 11), at -435 (email from Brian Elza to John Nichols, Landon Craft, Tres LeTard, and Jim Hill dated Dec. 7, 2017, "The JAM event is budgeted to make $46K. If we cancel the cancellation fee is @$13K. Plan would be to cancel JAM and move all of those teams to MARDI GRAS.").

[243] Deposition of Jim Hill, March 21, 2022, 118:2-14 ("To – to your question of attack events to maybe affect somebody's decision, there's one in particular that I can recall where the previous owner, Tammy Van Vleet, GSSA, and – Golden State Spirit Association. And she made this comment directly to me – and this is years ago – but, you know, 'I didn't want to sell, but I had to. You know, you guys were coming and it was either sell and – and get something out of it, or you put me out of business,' was her – was her terminology and opinion of why she chose to sell to Varsity when she did.").

Day weekend in January, which is consistent with the evidence in Varsity email exchanges.[244] The "Mardi Gras Extravaganza" event was identified as an "attack event" for the 2012-2013 season.[245] The teams and athletes participation in the "Mardi Gras Extravaganza" event was: 219 teams and 4,137 athletes for the 2014-2015 season; 159 teams and 2,712 athletes for the 2015-2016 season; and 136 teams and 2,246 athletes for the 2016-2017 season (see Table 60).[246] As described in an internal Varsity email, the "Mardi Gras Extravaganza" event had "60 ish teams" for the 2017-2018 season.[247] This is evidence that the "attack event" strategy was effective. Mardi Gras Spirit was acquired in December 2017 (see Table 32) and Varsity moved entrants from its head-to-head event back to the "Mardi Gras Extravaganza" for the January 2018 competition date.[248]

257. Dr. Murphy relies on this evidence for Mardi Gras Spirit, and similar evidence for other acquired brand events, to claim that the acquisitions were procompetitive as he claims participation increased (often, without the support of accurate data and correct calculations).[249] In particular, he claims "attendance [for the Mardi Gras Extravaganza National (a World Bids Event)] grew strongly, from 2,661 in 2017/2018 to 3,306 in 2018/2019, indicating that Varsity made improvements to the event that raised consumer valuation."[250] The 2,661 and 3,306 athlete participation numbers in 2017/2018 and

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[244] VAR00081435 (Hill Exhibit 11), at -435 (email from Brian Elza to John Nichols, Landon Craft, Tres LeTard, and Jim Hill dated Dec. 7, 2017, "As you know we often put events on other events in order to hurt our competitors. This past season we decided to put a JAM event in Baton Rouge to go head to head with MARDI GRAS world bid Event in New Orleans on Jan 14 weekend. Strategy worked and now Mardi Gras is sitting around 60 ish teams and JAM at 70. If MARDI GRAS doesn't hit 125 teams they lose their Tier 1 status. The JAM event is budgeted to make $46K. If we cancel the cancellation fee is @$13K. Plan would be to cancel JAM and move all of those teams to MARDI GRAS.").

[245] VAR00318604. VAR00318601 (Hill Exhibit 5), at -601 (email from Jim Hill to Brian Elza et al. (30+ recipients) on Aug. 28, 2013, "for the 'Attack Events' please reference the attached spreadsheet. I know there is a TON of info on it but I will explain on the sales call. Anything in Green is our event, Red is a JamBrands event, White is an IEP event. If you see a row highlighted in Orange that means this is a NEW event. Yellow means the event is no longer listed on the competitor brand website, so the assumption is the event no longer exists.").

[246] VAR00123779.

[247] VAR00081435 (Hill Exhibit 11), at -435 (email from Brian Elza to John Nichols, Landon Craft, Tres LeTard, and Jim Hill dated Dec. 7, 2017, "As you know we often put events on other events in order to hurt our competitors. This past season we decided to put a JAM event in Baton Rouge to go head to head with MARDI GRAS world bid Event in New Orleans on Jan 14 weekend. Strategy worked and now Mardi Gras is sitting around 60 ish teams and JAM at 70. If MARDI GRAS doesn't hit 125 teams they lose their Tier 1 status.").

[248] VAR00081435 (Hill Exhibit 11), at -435 (email from Brian Elza to John Nichols, Landon Craft, Tres LeTard, and Jim Hill dated Dec. 7, 2017, "The JAM event is budgeted to make $46K. If we cancel the cancellation fee is @$13K. Plan would be to cancel JAM and move all of those teams to MARDI GRAS.").

[249] Murphy Report, ¶ 295 ("total attendance increased across these brands post-acquisition, even when accounting for closed events.").

[250] Murphy Report, ¶ 334.

2018/2019 under Varsity's ownership are lower than the 4,137 athlete participation number for the event from 2014/2015 under Mardi Gras Spirit's ownership; the 2014/2015 athlete participation is the appropriate benchmark as this was achieved prior to the "attack events" strategy took effect. Attendance at the Mardi Gras Extravaganza did not grow, as Dr. Murphy claims. It almost returned to its pre-"attack events" levels (but not quite), so the appropriate inquiry is why the event was "worse" under Varsity's ownership (fewer "improvements" and lower "consumer valuation") than under Mardi Gras Spirit's ownership.

258. In this Mardi Gras Spirit example, and throughout his analysis of acquired brand events, Dr. Murphy fails to analyze the reasons for the changes in participation and fails to analyze Varsity's "attack events" conduct that precipitated and directly caused the acquisitions. To properly evaluate the anticompetitive effects of the acquisitions, it is imperative for the economist to properly evaluate all conduct related to the acquisitions. The effects of the conduct can only be understood by viewing the totality of the conduct, and not in isolation.

IV.B.2.b) Conditional Rebates

259. In my first report, I cited the academic literature on conditional rebates.[251] These academic articles identified the economic mechanisms and tested economic theories related to the implementation of conditional rebates schemes and how they allow a firm with established market power to exclude rivals and foreclose competition.

260. Varsity exploited its market power through the conditional rebates scheme in the VFP rebate program to lock-in customers to Varsity events and apparel purchases. Varsity senior management used the language of drug addiction to refer to the incentives it was trying to

[251] Ho, Katherine, Justin Ho, and Julie Holland Mortimer. "The use of full-line forcing contracts in the video rental industry." American Economic Review 102:2, 686-719 (2012); Bernheim, B. Douglas, and Randal Heeb, "A framework for the economic analysis of exclusionary conduct," The Oxford Handbook of International Antitrust Economics, Vol. 2 (2014): 3-39; O'Brien, Daniel P., and Greg Shaffer. "Vertical control with bilateral contracts." The RAND Journal of Economics 23:3, 299-308 (1992);Schwartz, Marius, and Daniel R. Vincent. "The no surcharge rule and card user rebates: Vertical control by a payment network." Review of Network Economics 5:1, 72-102 (2006); Greenlee, Patrick, David Reitman, and David S. Sibley. "An antitrust analysis of bundled loyalty discounts." International Journal of Industrial Organization 26:5, 1132-1152 (2008). In the economics literature, these potentially anticompetitive contracts are known under a variety of names, including "quantity-forcing contracts," "first-dollar discounts," "all-units discounts," and more generally "loyalty discounts." Such contracts are particularly likely to be anticompetitive when, as in this case, the amount of the discount or rebate depends upon the amount spent on a bundle of products, including some that competitive rivals may not offer.

instill in its customer base.[252]

261. The VFP rebates are percentages applied to a VFP customer's event spend.[253] The rebate percentages are conditional on customers attending a certain number of events and a certain amount of total spend (competitions and camps and apparel from Varsity).[254] VFP customers have to wait until the final event of the season and then must file W9 paperwork with Varsity and wait 6-8 weeks for processing in order to collect the rebates.[255] The rebates are not entirely paid out in cash, but (starting in 2016-2017), rebates were paid out 65% in cash and 35% in Fashion Dollars.[256] Fashion Dollars are rapidly expiring gift certificates that expire August 1st following the competition season.[257]

262. The more exclusive conditional rebates program that Varsity implemented was the "Network."[258] Under the terms of the "Network" rebate program as of 2011, All-Star gyms must commit to a "3 year agreement"; "MUST purchase NEW Varsity/CDT/Ozone uniforms during agreement"; "Spend 30k+ on competitions"; and "Attend at least 4 VFP events hosted

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[252] VAR00228394, at 394-395 (email from Jamie Parrish to Brian Elza, Tina Sexton, Jeff Fowlkes, and Tres LeTard dated Aug. 14, 2019, "No other sport, not even one, has rebate plans like Varsity/All Star cheer. Pros: We can keep them coming back for the Family Plan crack. Cons: Sooner or later, crack ho's turn on their pimp wanting more crack, better crack, and for less output. How we fix this? Blame it on Posh, or fake a survey, let me explain- OPTION ONE- CASUALLY THREATEN VIA VERBAL CAMPAIGN My suggestion is that we develop some talking points that basically threaten the cheer community without threatening them. Talking points for our brand managers and Memphis staff: * Man, the higher ups keep seeing all this negativity on social about Varsity and they don't see the benefit of the Family Plan anymore. They think that is must somehow be having the 'reverse' effect than they intended it to have. It really sucks, because if the gym owners don't stop blaming Varsity for everything, they (the higher up's) think that we are damned if we do, and damned if we don't. And if that is the case, they say why even both with a Family Plan, because they are still gonna' blame 'The Monopoly' for everything bad anyway. I need you to help me turn this around!! Next time you see something about Stay Smart, or bad Varsity press in general, try to squash it, because I need this family plan to hit our numbers! … OR OPTION TWO We send out a customer survey: We develop a 'survey' for the gym owners to take online. It would go something like this. … A survey of this type … would just use the power of suggestion to have them 'worry' that Varsity is indeed thinking of going public with the family plan to gain positive press. I think we would find that the negativity might stop, and we may even develop some 'brand loyalty' in the process."). VAR00182095 (Elza Exhibit 26), at -095 (email from Brian Elza dated Aug. 14, 2019 responding to the prior email, "Good thoughts.").

[253] See Varsity Rebate Data (VAR00352214).

[254] VAR00020214, at -214.

[255] VAR00020214, at -214 ("After your last Varsity Family Plan event for the 2016-2017 competition season, fax or email your completed W9 before the rebate deadline to claim your rebate. Please allow 6-8 weeks for processing.").

[256] VAR00020214, at -214. The document specifies 75% rebate as cash rebate, but the actual data proves that only 65% rebate was cash rebate. See VAR00352214 for Family Plan Tier Type "Standard VFP" and "Premier."

[257] VAR00020214, at -214.

[258] Heeb Report, ¶ 220 (citing VAR00081049, at -049); VAR00100695, at -709.

by 3 different brands with an average of 75% of the gym's programs."[259] An explicit requirement that participants in the "Network" rebate program "MUST purchase NEW Varsity/CDT/Ozone uniforms during agreement" and that the agreement is a 3-year commitment are canonical examples of "Network" customers being locked in to buying Varsity apparel.[260]

263. I analyze, based on Dr. Murphy's own calculations, the incentives for Varsity's rebate customers to attend a Varsity competition on the margin.[261] The marginal decision is influenced by the rebate that the customer stands to earn (in dollars) if it attends a particular Varsity event relative to the rebate that the customer stands to earn (in dollars) if it does not. Since the rebate percentage, applied to all Varsity competition spend, is conditional on the number of Varsity events attended, the decision to attend one fewer Varsity event will reduce the rebate percentage applied to the spend at all other Varsity competitions. This "additional" or marginal, rebate (in $) is the additional amount of rebate that the customer stands to collect by attending a particular Varsity event. That marginal rebate amount (in $) is compared to the total cost to attend the event (in $). For example, if a customer stands to collect a marginal rebate of $1,000 from attending a Varsity event and the event costs $4,000 in total, then the effective price to the customer is only 75% of the quoted registration fees (an effective reduction of 25% in the price). Thus, all other factors held constant, a rival event producer would have to set prices 25% lower than Varsity's prices to win this customer. I define 25% as the marginal rebate percentage (i.e., marginal rebate relative to total event cost).

264. Based on Dr. Murphy's own calculations, I report in Table 13 below, the relative size of Varsity's conditional rebates programs and the distribution of marginal rebate percentages across Varsity's VFP and "Network" customers. As shown in Table 13 below, the entrants associated with Varsity's VFP and "Network" customers account for between 59%-64% of the total entrants in Varsity's All-Star competitions (e.g., for the 2015-2016 season, 36.7% of entrants are from gyms who are not part of the conditional rebates programs and the remaining 63.3% of entrants are from gyms who are part of the conditional rebates

[259] VAR00100695, at -709. The "Network" agreement was made more restrictive by 2018 as membership required "8 Varsity All Star Event Minimum"; "$150,000 Minimum Spend"; "Purchase Varsity All Star Fashion Uniforms"; "Purchase Varsity All Star Fashion Shoes"; and "Purchase a 3rd Varsity All Star Fashion Category: Bags, Warm Ups, Practice Wear, Accessories, etc." See VAR00007743, at -768.

[260] VAR00100695, at -709.

[261] Murphy Report, Exhibit 53.

programs).

Table 13. Varsity's Conditional Rebates Programs

	Season			
	2015-2016	**2016-2017**	**2017-2018**	**2018-2019**
Percentage of Entrants that **Do Not** Participate in VFP or "Network" Rebates Programs				
	36.7%	40.9%	35.6%	40.5%
Percentage of Entrants that Participate in VFP or "Network" Rebates Programs				
	63.3%	59.1%	64.4%	59.5%
Percentage of Entrants in the VFP or "Network" Rebates Programs with Rebate Percentage Strictly Greater Than …				
… 20%	75.4%	79.9%	74.2%	58.5%
… 40%	32.4%	33.8%	33.7%	30.3%
… 50%	20.9%	22.7%	20.3%	20.3%
… 60%	15.0%	13.4%	13.7%	14.8%
… 80%	7.1%	6.8%	6.5%	10.3%
… 100%	3.6%	4.2%	3.7%	6.7%

Sources: Murphy Report, Exhibit 53.

265. The percentages at the bottom of Table 13 report the fraction of Varsity's VFP and "Network" customers (by entrant count) with a marginal rebate percentage strictly greater than key thresholds (20%, 40%, 50%, 60%, 80%, and 100%). For example, in the 2015-2016 season, 75.4% of the entrants at all rebate-participating gyms had a marginal rebate percentage greater than 20%; 32.4% of such entrants had a marginal rebate percentage greater than 40%; 20.9% of such entrants had a marginal rebate percentage greater than 50%; 15.0% of such entrants had a marginal rebate percentage greater than 60%; 7.1% of such entrants had a marginal rebate percentage greater than 80%; and 3.6% of such entrants had a marginal rebate percentage greater than 100% (see Table 13). The distributions were similar for later seasons.

266. For the 20% number, this means that a rival event producer, all other factors held equal, that set its price 20% lower than the Varsity price would be unable to win 47.7% of the Varsity entrants.[262] Even deducting rebates from prices, both Dr. Murphy and I agree that the average

[262] Of all Varsity entrants, 63.3% participate in the conditional rebates programs and of those 75.4% have a marginal rebate percentage that exceeds 20%. Thus, with a 20% discount relative to Varsity prices, the rival event producer's prices would be effectively more expensive (based on the effective price Varsity customers internalize accounting for the rebate) than the Varsity price for 47.7% of entrants (63.3% * 75.4% = 47.7%).

overcharge on Varsity events relative to my competitive benchmark is 16% (i.e., even after deducting rebates, Varsity events are at least 16% more expensive than the competitive benchmark; see Table 28).[263] Thus, rival event producers would have to set prices below the competitive benchmark to effectively compete for 52.3% of Varsity entrants, but are unable to compete for the remaining 47.7% of Varsity entrants.

267. To effectively compete for Varsity entrants, rival event producers, according to the distribution reported in Table 13, have to offer deep discounts relative to Varsity prices. The gross margin for event producers, including Varsity and rival event producers for which cost data is available (All Things Cheer, CSG, EPIC, and Spirit Celebration), is between 50%-60%. Thus, consider the effects for the 60% number. At this level, a rival event producer, all other factors held equal, could set its prices at a 60% discount relative to Varsity prices and still be unable to win 9.5% of the Varsity entrants.[264] This is an example of Varsity conduct that economists refer to as "predatory pricing." Varsity locks in 9.5% of its entrants and imposes restrictions that force rival event producers to set price below average variable cost in order to effectively compete with Varsity for those customers.

268. Finally, there is a small fraction of Varsity entrants that are 100% locked into Varsity events and would not switch to a rival event producer's event (all other factors held equal) even if the rival's event was free. As shown in Table 13 above, 2.3% of Varsity's entrants have a marginal rebate percentage greater than 100%, meaning that such customers stand to lose more total rebate by not going to the event than the cost of the event itself (effectively, the price of the event after accounting for the marginal rebate is less than zero).[265]

269. All of the above analysis, which is taken entirely from Dr. Murphy's own rebate analysis, is mathematically correct, and is standard antitrust analysis for some circumstances. In particular, this is the standard analysis that is appropriate if prices are negotiated directly between each seller and each individual customer. This is a common situation in industrial

[263] Murphy Report, Exhibit 58 ("Subtracting Rebates from Net Fees" regression results).

[264] Of all Varsity entrants, 63.3% participate in the conditional rebates programs and of those 15.0% have a marginal rebate percentage that exceeds 60%. Thus, with a 60% discount relative to Varsity prices, the rival event producer's prices would be effectively more expensive (based on the effective price Varsity customers internalize accounting for the rebate) than the Varsity price for 9.5% of entrants (63.3% * 15.0% = 9.5%).

[265] Of all Varsity entrants, 63.3% participate in the conditional rebates programs and of those 15.0% have a marginal rebate percentage that exceeds 100%. Thus, with a 100% discount relative to Varsity prices, the rival event producer's prices would be effectively more expensive (based on the effective price Varsity customers internalize accounting for the rebate) than the Varsity price for 2.3% of entrants (63.3% * 3.6% = 2.3%).

markets, with relatively few, well-identified customers. It shows that conditional rebates can create a situation in which, in order to lower its price enough to give a particular customer a better deal and make up for the marginal rebates that the customer stands to lose, the rival might have to price below its own cost. Such customers are "foreclosed." If sufficiently many of the monopolist's customers cannot be profitably accessed, even by an equally efficient rival, such a scheme is usually considered predatory pricing.

270. The anticompetitive impacts of conditional rebates are much greater in a market like competitive cheer competitions, in which the rivals do not negotiate directly with each customer for individualized prices. When the same registration prices are available to all customers, the rival not only has to lower its prices enough to offset the rebates the new customer will lose, but it also has to lower its own price to that same discounted level for all of its other existing customers. Thus, the threshold at which not even an equally efficient rival can possibly access a customer is much higher than in the individual negotiation case that Dr. Murphy analyzes. Facing a scheme like Varsity's conditional rebates programs, an equally efficient rival who intended to stay in the market indefinitely could not price below total cost, including a fair return on its capital. This is the also the definition of the perfectly competitive price in the long-run equilibrium. The analysis above shows that over 47.7% of Varsity entrants are foreclosed to a rival pricing at the competitive benchmark price. This analysis not only shows that the Varsity's conditional rebates programs are anticompetitive, but it also provides an independent validation of the benchmark competitive values. They are prices that are consistent with rivals being driven to exit the market.

IV.B.2.c) Exclusionary Conduct with Third-Party Venue Operators and Hotels

271. Varsity exploited its market power by using its relationship with venue owners and operators to require the venues to exclude rival event producers from hosting events for "60 days before or 90 days after" a Varsity event.[266] Given its extensive relationships with the main cheer competition venues across the United States, Varsity would acquire a rival event producer's upcoming schedule for the season and then systematically "use all resources available (venue contacts, [Conventions and Visitor Bureau] relationships, etc.) to hinder [rival event

[266] VAR00320890 (LeTard Exhibit 22), at -890 (email from Jeff Fowlkes to Tres LeTard dated Dec. 10, 2012: "The GWCC contacted me about several dates Billy requested which I was able to block because they were within the dates they protect for us. They do not allow anyone within 60 days before or 90 days after.").

producer] expansion into these new markets."[267] Providing venue operators with such ultimatums (our business or theirs) is an example of anticompetitive exclusionary conduct as it instills other-regarding preferences into the venue operators decision problem such that the incentives of the venue operators are aligned with Varsity's.[268] In essence, due to the market power operating in concert with the ultimatum, the venue operators become effectively an extension of Varsity and work to exclude and diminish rival event producers.

272. Varsity imposed restrictions on the athletes and families attending its two-day competitions under its "Stay-to-Play" program. Varsity's program required participants, regardless of if they had accommodations with relatives or a lower-cost room rate elsewhere, to stay at Varsity-sponsored hotels booked through a vendor.[269] In exchange for forcibly steering

[267] VAR00320890 (LeTard Exhibit 22), at -891 (email from Tres LeTard to Jim Thorp, Shannon Smith, Kevin Brubaker, and Regina Symons dated Dec. 2012: "Billy Smith and Spirit Celebration has continued to be a thorn in our side and a strong anti-Varsity spokesman. Attached are his tentative dates for 13-14 which includes several new locations. We need to use all resources available (venue contacts, CVB relationships, etc.) to hinder his expansion into these new markets. -Jim: Will you contact the MGM about his January 3-4, 2014 date? … also he's got a date at Shaumburg [sic] Renaissance in Chicago on January 11-12, 2014 … -Shannon: Will you contact Myrtle Beach Convention Center about his February 8-9, 2014 date? I would think we could block that with the amount of business we do there? -Kevin: Will you contact World Congress Center about his November 2-3, 2013 date? -Regina: Can you check on the Texas venues, namely your contacts in Galveston? Looks like he is trying for January 18-19, 2014 in Galveston which is the weekend after your event in Galveston, hopefully you can prevent this."); Deposition of Tres LeTard, November 22, 2021, 390:21-23.

[268] Deposition of Tres LeTard, November 22, 2021, 391:12-392:11 ("A. So in a lot of scenarios, we get – we form relationships with the venues where we host, hosted events. So we would, a lot of times, ask them for protection as far as not letting a competing event or an event be in their facility that could damage our event that was already existing in that facility. So what I was proposing is that they reach out to their contacts at these particular venues and discuss that this particular event producer would be – could damage the – damage our business with that facility potentially. Q. So, basically, you would say 'Oh, if you allow this event to take place here, we might take our business elsewhere?' A. That may have been the genesis of the conversation, but it could have been a different outcome. Q. And is there a particular reason why the venue would prefer your business over this other event company's business? A. In most cases, we were already there so we were an existing piece of business that was generating revenue for their facility, and we had a long-standing relationships.").

[269] Deposition of Jamie Parrish, March 3, 2022, 641:3-642:7 ("Q. That profit splitting; is that also unfair? A. I do know that parents have a hard time paying for this sport. It's a very expensive sport. And if they want to go and get a hotel 50 miles outside of Atlanta in Woodstock, Georgia, at a Hotel 6 and they want to take the MARTA train in to the Georgia World Congress Center, I think they should be allowed to do that. But instead, they have to stay at a preferred hotel as dictated by Varsity, and pay not only the hotel, but pay Varsity a kick on top of that and they don't even know what the kick is. You know, if you are going to make them pay for it, at least tell them how much it's going to be. Don't just slide it under the guise of the hotel's charging you this and then pocket the money… What's not logical is forcing someone to say in a hotel room without telling them you are going to make money off of the hotel room."); see also Deposition of Brian Elza, November 16, 2021, 343:2-17 (Q. What's your understanding of the stay-to-play? A. It was essentially a program that we put in place to secure large room blocks in cities for our larger events. It was a -- it was a way that Varsity could receive rebates back on hotels booked in those cities during those weekends that they hosted the events. Q. So Varsity kind of benefit by handling it, correct? A. Yes. We typically had a -- a vendor that assisted in that process, a housing vendor

guests to the Varsity-sponsored hotels, Varsity would receive kickback payments from the hotels, ranging in value from $10 a night per room from a third-party intermediary called Team Travel Source ("TTS") to $37.41 for those processed "in house" by the partner hotels. according to a 2016 internal analysis produced by Varsity.[270] Under this "Stay-to-Play" program, Varsity's partner hotels would often apply markups to a room to compensate for the third-party commissions and Varsity kickbacks that were required to be paid.[271]

273. The company estimated that its "Stay-to-Play" program would generate $1.7 million more in revenue for Varsity in 2017 than it did in 2016.[272] When Varsity acquired Aloha in December 2016, all two-day Aloha brand events—which had until then been free of housing restrictions—began requiring "Stay-to-Play" rules.[273] Varsity's acquisition of the rival event producers, including Aloha, allowed Varsity to reduce the number of local competitions to one-fourth of the original amount and to impose "Stay-to-Play" restrictions on the Varsity events that remained (which comprised the majority of the opportunities to cheer athletes to compete).[274] Consequently, athletes and their families had limited choice other than to pay

that would oversee that process. So they would do all the online bookings, and at the end of the year write us a check for the rebates that were received."); see also Id., 344:7-22 ("Q. Isn't there a USASF rule that they made that if -- if you didn't attend one of those hotels, Varsity-sponsored hotels, if they found out about it, you could be disqualified from the event? Varsity would have had that rule. I don't think they would have collaborated with USASF in that. But yes, you had to show proof before you stayed at any of those events that were part of that stay-to-play program. Q. In fact, if you had a relative that was in that town where the event was going to be, you couldn't stay with your relative; you had to stay at the Varsity stay-to-play hotel, correct? A. In most cases, that is accurate.").

[270] VAR00124047, at -047; VAR00083611 (Sadlow Exhibit 4), at -612 ("Under this new plan we would leave Connections doing NCA and Cheersport for the time being. We would then bring the remaining Worlds Bids only in house. This would require either an acquisition of a smaller housing company or use Kellie Thorpe from Gainesville and Leanne Humphries from Knoxville to manage since both of them are already doing that.").

[271] Deposition of Jamie Parrish, March 3, 2022, 369:21-370:6; 638:24-639:6 ("A…The stay-to-play price was either equal to or higher than the published rate at most hotels. That's what happens when kickbacks are -- happen to put on top of the actual hotel fee so that the third party can actually make money that the hotels have to tack on the extra cost in order to pass on a rebate for, you know, attrition to a hotel that they book with.").

[272] VAR00083611 (Sadlow Exhibit 4), at -612.

[273] Deposition of Sarah Minzghor, December 17, 2021, 238:1-6 ("Q. … With respect to the Aloha and the GSSA acquisitions, what was the results for Fusion? A. When Varsity acquired GSSA and Aloha, it pretty much took away all of our options that were not Varsity competitions away..."); Ibid., 238:22-239:1 ("Q. Did you see any changes in the spectator fees after GSSA and Aloha's acquisition by Varsity? A. Yeah. GSSA, Aloha, and Cali Finale never had spectator fees until they were acquired by Varsity. Q. Did you see changes in the location of the events? A. Some of them stayed in the same location; some of them got completely eliminated, and some of them got moved to lesser – lesser facilities. Q. Did you see any changes in the stay-to-play rules? A. Well, immediately, any two-day events had to follow the stay-to-play rules where they didn't have any before.").

[274] Minzghor Deposition, Dec. 17, 2021, 240:2-7 ("Q. Did you have to travel farther to attend GSSA and Aloha events after they were acquired by Varsity? A. Yes. For some of them. I think there were maybe three that were -- that stayed local, and there used to be, you know, a dozen.").

inflated housing prices if they wanted to compete at all.

274. Internal Varsity discussions indicate that revenues from the "Stay-to-Play" program, despite mounting criticism from customers, was an objective of Varsity senior leadership.[275] Varsity continued to expand the restrictions of the program as its kickback revenue increased and its market share of competitions increased, including: restricted exemptions for local athletes to force more of them into the program;[276] rebranding "Stay-to-Play" as "Stay Smart" to reduce the "monopolistic" connotation;[277] disqualifying athletes that failed to show proof of compliance with the program;[278] and deliberately discarding options that would have alleviated the burden of these housing fees on lower income households.[279] With the tightening restrictions and Varsity's expansion of market power, the revenues it collected from the "Stay-to-Play" (and rebranded "Stay Smart") program increased to approximately $4 million by 2020.[280]

[275] VAR00229759 (Parrish Exhibit 20), at -760 (email from Brian Elza to Tina Sexton dated Feb. 4, 2019: "Do we really need to enforce a housing requirement at 78% of our 2-day events? Per our managers-yes. Per the pressures put onto us from our ownership group - no one is looking to go backwards with revenue.").

[276] Deposition of Sarah Minzghor, December 17, 2021, 243:20-244:6 ("Q. Have there been any changes to the stay-to-play requirements in the last three years? A. Yes. The stay-to-play had -- it used to be that if you lived within 90 miles of a competition, you could be excluded from stay-to-play because they assumed, you know, you could drive back and forth and didn't need a hotel. I don't know if it was this year or last year, they restricted that to 70 miles. So you can live within an hour of an event, but they still won't allow you to compete unless you buy a hotel room.").

[277] Deposition of Jamie Parrish, March 3, 2022, 368:19-369:1 ("Q. What housing revenue is that? Could you describe what that means? A. Well, Stay Smart is a program developed by Ms. Sexton and myself. It was stay-to-play. And the word stay-to-play was being attacked because it was saying, you know, you would have people going: My daughter's cheerleading team is attending a competition in Atlanta, my sister lives in Atlanta and we want to say with her, and yet Varsity won't allow us to stay with her, we have to stay in a stay-to-play hotel. Whoever designed stay-to-play was before me. And Tina and I brought up the fact that just the name stay-to-play, was very oppressive and monopolistic sounding.").

[278] Deposition of Brian Elza, November 16, 2021, 344:3-22 (Q. Isn't there a USASF rule that they made that if -- if you didn't attend one of those hotels, Varsity-sponsored hotels, if they found out about it, you could be disqualified from the event? A. Varsity would have had that rule. I don't think they would have collaborated with USASF in that. But yes, you had to show proof before you stayed at any of those events that were part of that stay-to-play program. Q. In fact, if you had a relative that was in that town where the event was going to be, you couldn't stay with your relative; you had to stay at the Varsity stay-to-play hotel, correct? A. In most cases, that is accurate.").

[279] VAR00229759 (Parrish Exhibit 20), at -760 (email from Brian Elza to Tina Sexton dated Feb. 4, 2019: "'Can we look at enforcing a threshold of income that does make it essential to enforce a housing requirement? For example, if you don't make more than $X on your housing requirement, then you need to stop requiring it?' If we could replace the revenue we could. Anyone have a few million laying around? Actually a lot more than that.").

[280] VAR00420493 (Nangia Exhibit 26), at -493.

IV.B.3. Dr. Murphy's Critiques are Based on Conceptual Situations and Hypothetical Examples and Ignores the Relevant Facts in the Case

275. Dr. Murphy writes, "Plaintiffs' experts likewise fail to provide any reliable economic opinion to support Plaintiffs' allegations that Varsity has monopoly power either in the markets that they allege or in the markets that are relevant to analysis of the contested conduct. Their experts provide no real analysis regarding the extent to which Varsity is constrained by ongoing competition or to establish the existence of barriers to entry in either the markets they allege or the correctly defined relevant markets."[281]

276. Dr. Murphy mischaracterizes the opinions in my first report and the analysis therein that supports those opinions. First, I cite evidence from Varsity's own documents, dated 2011, including an extended quote directly from Varsity's own documents that describe in sufficient detail the business and economic sources of the "significant barriers to entry" that it had established as early as 2011.[282] There is no reason to suspect that the detailed information provided by Varsity in that quoted material is incorrect or inconsistent with the viewpoint held by the company when operating its business as of 2011. Second, my subsequent analysis confirmed Varsity's claims about the "significant barriers to entry" that it had established as early as 2011 and verified that such barriers had only expanded since

[281] Murphy Report, ¶ 216 (internal citations omitted).

[282] Heeb Report, ¶ 118 (citing VAR00424538, at -552); VAR00424538, at -552 ("Through relationships and infrastructure established over a long period of time, there exists a high barrier to entry, characterized by the following: - Established network. Varsity has a unique set of partners and alliances both domestically and internationally, comprised of long-standing relationships with corporations, colleges, high schools, middle schools and industry governing bodies. In addition, the Company has a unique presence in online and print media, enhancing brand awareness and allowing the Company to reach its core demographic across a variety of channels. Varsity believes it would take a significant investment in time and money for a competitor to achieve similar goodwill among industry participants. - Scope of product and services offering. The Company's comprehensive products and services offering allows it to benefit from cross-selling and cost sharing opportunities. For example, in order to participate in the various special events Varsity offers, such as the nationally-televised Macy's Thanksgiving Day Parade in New York City, a cheerleader must attend and excel at one of the Company's camps. Participants in Varsity's special events often come from a variety of schools, which in turn requires the need for an additional uniform in order to portray a unified appearance. Similarly, the Company holds local cheerleading competitions that progress to various regional levels during the course of the fall, which is the only way for a team to qualify for Varsity championships, which are held at Walt Disney World Resort in Orlando, Florida and nationals televised on ESPN2. - Economies of scale. Varsity employs the largest sales force in the industry, which has relationships with over 40,000 middle schools, high schools, colleges and 2,500 cheerleading gyms in all 50 states. The Company also hosts over 5,700 summer camps and approximately 300 national and regional competitions, with seven nationally-televised championships. As the market leader, Varsity also benefits from volume and critical mass efficiencies, namely spreading of fixed costs, negotiating power with suppliers, and an improved production process.").

2011.[283]

277. Further, Dr. Murphy's testimony on the definition of barriers to entry is inconsistent with the definition from his expert report and inconsistent with economic orthodoxy.[284] Dr. Murphy's expert report defines barriers to entry based on George Stigler's definition as "a cost of producing (at some or every rate of output) which must be borne by firms that seek to enter an industry but is not borne by firms already in the industry."[285] Dr. Murphy further elaborates, "[p]ut differently, it is a cost advantage that an incumbent enjoys vis-à-vis potential entrants."[286] Both are appropriate definitions. In Dr. Murphy's testimony, he compared the costs that a would-be entrant would have to incur to establish customer relationships in the year of entry with the totality of costs that Varsity has incurred to establish its own customer relationships [presumably since its founding in 1974].[287] This is incorrect as a matter of economics. The relevant comparison is between the cost that Varsity would have to incur in the current year to maintain its customer relationships and the cost that a would-be entrant would need to incur in the same year to establish customer relationships on par with Varsity. Obviously, the costs are significantly higher for the would-be entrant, so this is a quantifiable "cost advantage that an incumbent enjoys vis-à-vis potential entrants."[288] This is not to conclude that the barriers to entry imply or confer competitive harm, but merely to state, as an economic matter, the presence of barriers to entry.

278. Dr. Murphy redefines barriers to entry in his deposition testimony.[289] He performs no

[283] Heeb Report, ¶¶ 126, 169-170, 183, 186-187, 197-198.
[284] Murphy Deposition, November 4, 2022, 205:7-207:25; 289:5-290:2.
[285] Murphy Report, ¶ 219, note 355 (citing G. Stigler, "Barriers to entry economies of scale, and firm size," in: The Organization of Industry (Chicago and London: The University of Chicago Press, 1983), p. 67).
[286] Murphy Report, ¶ 219, note 355.
[287] Murphy Deposition, November 4, 2022, 205:7-207:25.
[288] Murphy Report, ¶ 219, note 355.
[289] Murphy Deposition, November 4, 2022, 205:7-206:4 ("A. I don't think that these would be elements that I would typically associate with barriers to entry, or that these create barriers to entry from an antitrust or economic sense. I think what they're talking about here is some of the assets these organizations have. In this case, Varsity, one of their assets is they have a network. The other is they offer a wide – they offer a scope – broad scope of products. And the third one is, at least according to their assessment, they seem to say they are enjoying some forms of economies of scale. I think what often gets missed is that there – you know, those aren't the only attributes that matter, and those aren't costless. … So, yeah, there are advantages. And these kinds of documents typically focus on advantages that a company has."); Id., 289:5-289:16 ("A. It doesn't necessary mean there would be an entry barrier even. It's just – you might have a comparative advantage because you combine various strengths. That doesn't make it an entry barrier. I mean, you can have firms that are – have

analysis on the barriers to entry that I identified in my first report, instead reclassifying these economic features of the markets as "comparative advantages" between firms, no different than LeBron James or Steph Curry's skill advantage in the sport of basketball.[290] Dr. Murphy's testimony dismisses nearly all examples of barriers to entry, examples that economists have historically accepted as canonical examples of barriers to entry, including costs to maintain/establish customer relationships, scope of product and services offering (i.e., potential for cross-selling and cross-subsidization), and scale of business operations (i.e., returns to scale).[291] He fails to recognize what economists have historically accepted: that companies can have "comparative advantages" over other firms and simultaneously that such advantages represent "a cost advantage that an incumbent enjoys vis-à-vis potential entrants," and therefore a barrier to entry.[292] These same "comparative advantages" that Dr. Murphy discusses in his testimony were identified by Varsity itself as the main sources of the "significant barriers to entry" that it had established in the competitive cheer markets in which it operates (as early as 2011).[293]

IV.B.3.a) My Price Analysis Demonstrate that I Properly Defined Product and Geographic Markets in my June Report

279. Dr. Murphy states, "Plaintiffs' experts fail to provide reliable or useful opinions and fail to prove their assertions regarding the relevant markets for assessing the conduct at issue

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particular strengths; they can have a particular combination of strengths. That doesn't make it into an entry barrier. You're just talking about some comparative advantage.").

[290] Ibid., 289:17-290:2 ("I mean, there are many people in various industries who have a comparative advantage. They are good at what they do. That doesn't mean the other people in the industry face a barrier to entry, you know. That – for example, the fact that LeBron James or Steph Curry are such great basketball players doesn't make it – that's not a barrier to entry to playing in the NBA."). LeBron James and Steph Curry have a "comparative advantage" over me in the sport of basketball. Height, skill, and strength (and my lack thereof) represent barriers to entry into the NBA. If there are 450 basketball players in the world with a "comparative advantage" over me in the sport of basketball, this represents a barriers to entry into the NBA as the total number of active roster spots in the NBA is only 450 (15 active roster spots per team times 30 NBA teams).

[291] Murphy Deposition, November 4, 2022, 205:7-207:25; 289:5-290:2.

[292] Murphy Report, ¶ 219, note 355.

[293] Murphy Deposition, November 4, 2022, 205:7-206:4 ("A. I don't think that these would be elements that I would typically associate with barriers to entry, or that these create barriers to entry from an antitrust or economic sense. I think what they're talking about here is some of the assets these organizations have. In this case, Varsity, one of their assets is they have a network. The other is they offer a wide – they offer a scope – broad scope of products. And the third one is, at least according to their assessment, they seem to say they are enjoying some forms of economies of scale. I think what often gets missed is that there – you know, those aren't the only attributes that matter, and those aren't costless. … So, yeah, there are advantages. And these kinds of documents typically focus on advantages that a company has."); Heeb Report, ¶ 118 (citing VAR00424538, at -552); VAR00424538, at -552.

because they fail to consider product markets smaller than All Star cheer and scholastic cheer and fail to consider regional markets smaller than USASF regions."[294] Dr. Murphy continues later in the paragraph, "Plaintiffs' experts also fail to demonstrate that the relevant product markets do not include activities other than cheer."[295]

280. Further, Dr. Murphy's own travel distance analysis and my analysis (as previously described; see Table 11 and Table 12 above) prove that gyms travel, on average, several hundreds of miles to attend competitions, and significantly further for World Bids Events and for post-season events. Further, as previously described, quantitative analysis in my first report analyzes competitive effects at the level of the CSA, which is a geographic area smaller than USASF regions.[296] That analysis confirms that there is common impact of the conduct across CSAs in a region.

281. Dr. Murphy writes, "Dr. Heeb and Dr. Netz consider the possibility of participant substitution to gymnastics and other activities, but then rule out such substitution without any substantive analysis."[297] Dr. Murphy continues, "they fail to provide empirical support for their assertions that market demand for cheer competitions and cheer camps is sufficiently inelastic that the prices charged by Varsity and other suppliers are not constrained by the availability of non-cheer activities."[298]

282. My analysis of the available evidence on sideline cheer, gymnastics, and competitive dance form the basis of my opinions that none of those activities is in in the same relevant product market as competitive cheer.[299]

IV.B.3.b) Dr. Murphy Mischaracterizes the Degree of Competition in the Relevant Antitrust Markets

IV.B.3.b(i) Cheer Competitions Markets

283. Dr. Murphy states, "Plaintiffs' assert that Varsity has 90% of the alleged 'All-Star Cheer Competition Market,' and 70% of the alleged 'School Cheer Competition Market,' but Plaintiffs' experts fail to provide a reliable basis for these assertions."[300] Dr. Murphy

[294] Murphy Report, ¶ 225 (internal citations omitted).
[295] Murphy Report, ¶ 225 (internal citations omitted).
[296] Heeb Report, ¶¶ 141-144; ¶¶ 313-316; ¶¶ 327-331; Table 27.
[297] Murphy Report, ¶ 226 (internal citations omitted).
[298] Murphy Report, ¶ 226 (internal citations omitted).
[299] Heeb Report, ¶¶ 122-125.
[300] Murphy Report, ¶ 227 (internal citations omitted).

continues later in the paragraph, "Dr. Heeb finds that Varsity's market share in All Star cheer in terms of number of events is only 56.2%, which, among other things, ignores non-USASF sanctioned events."[301]

284. The 90% revenue share of All-Star cheer competitions was reported by Varsity in its own internal market research documents (see Table 4).[302] The company's document included an analysis of the revenues for Varsity, 20 other Tier 1 event producers, three Tier 2 event producers, 44 Tier 3 event producers, and 11 Tier 4 event producers.[303] These revenue shares figures are also approximately consistent with what is known about the other firms in the market. Varsity's events are on average about 27% more expensive than the competitive benchmark, which are themselves top tier firms. Participation at Varsity's events is undoubtedly substantially higher than its competitors, particularly the smaller producers.

285. To recap my opinions on market share from my first report, I calculated Varsity's event count share of All-Star cheer competitions by counting the number of Varsity All-Star cheer competitions and comparing it to the total number of USASF-sanctioned cheer competitions. Data was available for both the numerator and the denominator of my event count share calculation.[304] From the calculation, I determined that Varsity's event count share of All-Star cheer competitions equaled "56.2% at the end of the 2017-2018 season (following its acquisition of EPIC)."[305]

286. I did not have available data on the number of non-USASF sanctioned events. And neither did Dr. Murphy.[306] Dr. Murphy cites evidence of "a number of non-USASF All Star events," but his cited information is for the 2022-2023 season, which is five years after the most recent season for which I calculate Varsity's event count share of All-Star cheer competitions in Table 12 of my first report.[307] Dr. Murphy further cites "non-USASF event producers like Liberty Spirit and Freedom Spirit" and "[a]nother recent non-USASF example … Revolution Championships," but none of these event producers were in the market before March 2022, which is two years after the most recent season for which I calculate Varsity's event count

301 Murphy Report, ¶ 227 (internal citations omitted).
302 See VAR00101102.
303 VAR00101102, tab "Market Share" and tab "List of Companies."
304 See Varsity Registration Data; USASF_00000297, at -297.
305 Heeb Report, ¶ 178.
306 Murphy Deposition, November 4, 2022, 119:8-12 ("We have very little data on non-USASF competitions.").
307 Murphy Report, ¶ 228; Heeb Report, Table 12 (indicating market shares calculated as recently as 2017-2018 season, the most recent season with a Varsity acquisition of a rival event producer).

share of All-Star cheer competitions in Table 12 of my first report.[308] Dr. Murphy cites several other examples of non-USASF event producers from fact witness deposition testimony, but each cited example is to a small number of event producers.[309] None of these cited examples are any more than negligible competitors relative to the 467 Varsity All-Star competitions that took place in the 2017-2018 season and the 831 USASF-sanctioned competitions in that same season (see Table 3).

287. Further, contrary to Dr. Murphy's claim,[310] I did provide the sources for my calculation of Varsity's event count share of All-Star cheer competitions.[311] The source for the "data … reported by USASF as the total number of USASF sanctioned events" is the same as the source for the "total number of sanctioned USASF events."[312] Even if Dr. Murphy was unclear of the source of the calculation (and failed to review the details of my analysis provided in my backup materials), his decision to "infer that [Dr. Heeb] intended to make a statement about Varsity's share of Worlds bid events" is unsupported by any evidence.[313]

288. Dr. Murphy writes, "Dr. Heeb and Dr. Netz have not demonstrated that Varsity's market share, whatever it is, is indicative of monopoly power rather than reflecting consumer preference for the price and quality of Varsity events over those of its numerous competitors."[314]In general, Dr. Murphy is correct. A high market share can be indicative, without further evidence and without context, of "consumer preference for the price and quality" of the product sold by the company with the high market share.[315] However, I have analyzed both price and quality. First, I determined that Varsity's prices for its events are statistically and significantly higher than prices for events operated by rival event producers.[316] Relatedly, Varsity increases prices significantly for acquired brand events.[317] See Table 1 and Table 35 for the updated and most recent analysis of the price effects for

[308] Murphy Report, ¶ 245; Heeb Report, Table 12 (indicating market shares calculated as recently as 2017-2018 season, the most recent season with a Varsity acquisition of a rival event producer).
[309] Murphy Report, ¶ 100, notes 158, 159; ¶ 103, note 167; ¶ 122, note 220;
[310] Murphy Report, ¶ 227, note 364.
[311] Heeb Report, ¶ 86, note 60 ("According to USASF, the total number of athletes, the total number of sanctioned USASF events, and the total number of event producers"), citing USASF_00000297, at -297; Table 2, listing USASF_00000297, at -297 as source; Heeb Backup Materials for Tables 2, 12, and 17.
[312] Heeb Report, ¶¶ 178, 86.
[313] Murphy Report, ¶ 227, note 364.
[314] Murphy Report, ¶ 228 (internal citations omitted).
[315] Murphy Report, ¶ 228.
[316] Heeb Report, Tables 21 and 22.
[317] Heeb Report, Tables 19 and 20.

acquired brand events. Second, I did not find any evidence to support Dr. Murphy's theory that Varsity events had higher quality than events operated by rival event producers. To the contrary, I find evidence from a Varsity's executive testimony that Varsity's acquisitions permitted the company to take steps to reduce the quality of its events, both its legacy events and its acquired brand events.[318]

289. Dr. Murphy further writes, "Dr. Heeb mentions that there are over 50 Tier 2 and Tier 3 All Star event promoters in his background section, and reports that there were 95 event producers and events in the 2018/2019 season. … However, these many other event producers do not factor into [his] analyses in any substantive way."[319]

290. Dr. Murphy mischaracterizes my opinions in my first report. I did consider all All-Star event producers as considered by Varsity in its internal market research document from September 2016 that I previously cited as the basis for my revenue market share calculation (see Table 4).[320] Varsity's internal market research document estimates revenues for Varsity, 20 other Tier 1 event producers, three Tier 2 event producers, 44 Tier 3 event producers, and 11 Tier 4 event producers.[321] These counts do not even include event producers that were identified by Varsity, but for which estimates of revenue were not provided in the market research document. The revenues from the 20 other Tier 1 event producers, three Tier 2 event producers, 44 Tier 3 event producers, and 11 Tier 4 event producers are explicitly included

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[318] Deposition of Brian Elza, Nov. 16, 2021, 285:14-287:10 ("Q. And then No. 2 says, 'Reduce escalating production capabilities.' What does that mean? A. I mentioned this earlier, but we were – we had started spending too much money and overproducing these events, creating more of a rock star feeling – more lights, more bells, more fireworks – that it was a – it was an opportunity to reduce that. We were overdoing it. Q. And the purchase of JAM Brands means that you were taking out a competitor that might have caused this escalation of production capabilities; its that right? A. We were all – we were all doing it. We were just trying to one-up the guy before us. Q. You were one-upping your competitors, but if you take out your largest competitor, then you don't have as much incentive to one-up your competitors; is that fair? A. We learned we could be successful without all the bells and whistles, is really what we figured out. Q. And that's especially true because you purchased your largest competitors; isn't that fair. A. We – we would take a look at all of our acquisitions to see if there were some opportunities where we could make some changes that would, you know, help with the profitability of the events. Q. Let me just understand this. So one way to compete with JAM Brands events is to have more bells and whistles at the events to try to attract athletes and gyms, right? A. Yes, that's correct. Q. And another way to compete with JAM Brands events is to just purchase JAM Brands, right? A. In a sense, yes. Q. Right. So you can purchase JAM Brands events, and then you don't have to escalate the bells and whistles that you would potentially have to do if you had a big competitor in the marketplace escalating up against you; is that fair? A. Yes, that's fair." (omitting attorney objections)).

[319] Murphy Report, ¶ 229 (internal citations omitted).

[320] See VAR00101102.

[321] VAR00101102, tab "Market Share" and tab "List of Companies."

in the calculation of Varsity's market share as of September 2016 (equaled 75%).[322] So the presence of the large number of event producers does factor into my analysis. The revenues reported for the large number of event producers (not including Varsity or the companies it would later acquire) from the internal market research document confirm my opinion that rival event producers operated events with significantly smaller revenues than Varsity events.

291. Dr. Murphy writes, "[t]hese participant movements indicate willingness and ability among customers to substitute between Varsity competitions and alternatives, whether competitor events of other activities. Again, Plaintiffs' experts fail to establish any monopoly, as this would imply a lack of competitive alternatives."[323]

292. Dr. Murphy does not recognize my distinction, which is the standard convention among antitrust economists, between a monopoly and a perfect monopoly.[324] A perfect monopolist has 100% market share, by definition, and therefore there are not other alternatives in the market, competitive or otherwise. A monopolist is "a firm with sufficient market power to extract an anticompetitive monopoly rent"; it's market share need not be 100%.[325] Thus, there can be other alternatives in the market with the monopolist, such as the other event producers in the cheer competitions market that compete against Varsity. Further, those other alternatives can be described as "competitive" if they offer prices that would be charged by all firms if the market was competitive. All the following can be observed features of a market featuring a monopolist exploiting its market power to sustain an elevated price without losing share: the alternatives in the cheer competitions market sell at a lower price than Varsity (which can be established to be a "competitive" price), Varsity prices include an "anticompetitive monopoly rent," and there are observed participant movements back and forth and between "Varsity competitions and alternatives."[326] A monopolist exploiting its market power would do so in a manner for the explicit purpose of sustaining elevated prices without losing customers.

293. Dr. Murphy rules out the above possibility (alternatives price below Varsity, Varsity prices include a monopolist rent, and observed switching back and forth between Varsity and the

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[322] See VAR00101102.
[323] Murphy Report, ¶ 231 (internal citations omitted).
[324] Heeb Report, ¶ 308, note 374.
[325] Heeb Report, ¶ 308, note 374.
[326] Murphy Report, ¶ 231.

alternatives) out-of-hand, with no analysis and no citation to the academic literature.

IV.B.3.b(ii) CHEER CAMPS MARKETS

294. Dr. Murphy writes, "the year-to-year fluctuation in Varsity camp attendance by schools indicates that customers have flexibility to add and subtract Varsity camp from their yearly schedule of activities."[327]

295. First, Dr. Murphy has provided no evidence that a significant number of customers that attend one Varsity camp in a summer would be looking to "add" a second Varsity camp, or even a second camp run by someone other than Varsity, in the following summer. Camps are not like competitions. Teams typically attend one camp per summer.

296. In Varsity's camps registration records from 2015-2020, the most common customer type to register for a camp was 'High Schools' with around 82,000 registrations.[328] Tracking the customer identifying information for these "High School" customers, 69% of High Schools that registered for a Varsity camp in 2015 also registered for a Varsity camp in 2016. Similarly, 69% of High Schools that registered for a Varsity camp in 2016 also registered for a Varsity camp in 2017; 70% of High Schools that registered for a Varsity camp in 2017 also registered for a Varsity camp a Varsity camp in 2018; and 72% of High Schools that registered for a Varsity camp in 2018 also registered for a Varsity camp in 2019.[329]

297. The data demonstrates strong persistence in Varsity camp attendance from year-to-year, inconsistent with the "year-to-year fluctuation" that Dr. Murphy relies upon as the basis for his opinions on competitive alternatives in the cheer camps markets.

IV.B.3.b(iii) CHEER APPAREL MARKET

298. Dr. Murphy writes, "Varsity's apparel and competition registration data indicate that Varsity's customers are not purchasing all of their needed cheer apparel from Varsity; rather, they are acquiring apparel from multiple suppliers. That customers often purchase from multiple apparel suppliers is also confirmed by witness testimony."[330]

299. I agree that Varsity faces some competition in the cheer apparel market. Nfinity, identified as an apparel company that "has emerged as a strong competitor," was uses as the

[327] Murphy Report, ¶ 233 (internal citations omitted).
[328] Camps Registration Data.
[329] Camps Registration Data.
[330] Murphy Report, ¶ 234 (internal citations omitted).

competitive benchmark for my overcharge analysis in the cheer apparel market.[331] That competition, however, does not place a sufficient competitive restraint on Varsity's ability to raise prices above a competitive level, which is the relevant inquiry for market power.[332] The bases for my opinion in my first report that Varsity has market power in the cheer apparel relevant market include: "Varsity's various schemes and policies restrict rival companies from selling merchandise at Varsity events";[333] Varsity's aggressive enforcement of its trademarks;[334] Varsity's acquisitions of rival apparel brands;[335] and Varsity's supracompetitive apparel pricing.[336] Dr. Murphy has now shown that this support for market power is deficient, nor does he offer up record evidence to show no market power.

IV.B.3.c) Varsity's Monopoly Power is Enhanced and Supported by Barriers to Entry in the Markets and by Conduct It Has Taken to Further Enhance Such Barriers

300. Dr. Murphy writes, "Plaintiffs fail to provide any economic analysis to conclude that barriers to entry are substantial in any of the markets they allege, among other reasons. Generally, they merely assert that barriers to entry are high based on select references to course-of-business documents that use the term, without evaluation of whether the documents use the term in the same way economists do."[337]

301. As above, Dr. Murphy mischaracterizes the analysis in my first report related to barriers to entry. First, I cite evidence from Varsity's own documents, dated 2011, including an extended ¾-page quote directly from Varsity's own documents that describe in sufficient detail the business and economic sources of the "significant barriers to entry" that it had established as early as 2011.[338] Second, my subsequent analysis confirmed Varsity's claims about the "significant barriers to entry" that it had established as early as 2011 and verified

[331] Murphy Report, ¶ 234.
[332] Heeb Report, Tables 23 and 24; ¶ 193 (citing VAR00310631, at -663, "How do we price relative to competitors? Based on VSF catalog pricing we are consistently higher prices than our competitors in all major product categories.").
[333] Heeb Report, ¶ 188.
[334] Heeb Report, ¶ 189 (citing VAR00272717, at -718, in which Varsity's rival in a legal proceeding "alleged that Varsity was improperly seeking a century-long copyright monopoly on cheerleader-uniform designs.").
[335] Heeb Report, ¶ 94 ("[Varsity's] Cheer apparel acquisitions included BSN in 2013 and allgoods LLC in 2015.").
[336] Heeb Report, ¶ 193 (citing VAR00310631, at -663, "How do we price relative to competitors? Based on VSF catalog pricing we are consistently higher prices than our competitors in all major product categories.").
[337] Murphy Report, ¶ 236 (internal citations omitted).
[338] Heeb Report, ¶ 118 (citing VAR00424538, at -552); VAR00424538, at -552.

that such barriers had only expanded since 2011.[339] In this regard, Varsity appears to be using the term in manner consistent with conventional antitrust analysis.

302. By contrast, Dr. Murphy's testimony on the definition of barriers to entry is inconsistent with the definition from his expert report and practical economic usage.[340]

IV.B.3.c(i) CHEER COMPETITIONS

303. Dr. Murphy writes, "Plaintiffs' experts provide no reliable economic analysis to show there are significant barriers to entry for cheer competitions. The nature of the industry indicates that such barrier do not exist."[341]

304. I cite evidence from Varsity's own documents that describe in sufficient detail the business and economic sources of the "significant barriers to entry" that it had established as early as 2011.[342] According to Varsity's own analysis and in its own words, as early as 2011, not only did the "nature of the industry" permit significant barriers to entry, but Varsity had cultivated and established such significant barriers to entry as of 2011.[343]

305. Dr. Murphy claims, "Dr. Heeb provides no analysis of the start-up costs he cites, such as 'promotion and marketing' and 'paying employees, travel costs, and other business

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[339] Heeb Report, ¶¶ 126, 169-170, 183, 186-187, 197-198.

[340] Murphy Deposition, November 4, 2022, 205:7-207:25; 289:5-290:2.

[341] Murphy Report, ¶ 238 (internal citations omitted).

[342] Heeb Report, ¶ 118 (citing VAR00424538, at -552); VAR00424538, at -552 ("Through relationships and infrastructure established over a long period of time, there exists a high barrier to entry, characterized by the following: - Established network. Varsity has a unique set of partners and alliances both domestically and internationally, comprised of long-standing relationships with corporations, colleges, high schools, middle schools and industry governing bodies. In addition, the Company has a unique presence in online and print media, enhancing brand awareness and allowing the Company to reach its core demographic across a variety of channels. Varsity believes it would take a significant investment in time and money for a competitor to achieve similar goodwill among industry participants. - Scope of product and services offering. The Company's comprehensive products and services offering allows it to benefit from cross-selling and cost sharing opportunities. For example, in order to participate in the various special events Varsity offers, such as the nationally-televised Macy's Thanksgiving Day Parade in New York City, a cheerleader must attend and excel at one of the Company's camps. Participants in Varsity's special events often come from a variety of schools, which in turn requires the need for an additional uniform in order to portray a unified appearance. Similarly, the Company holds local cheerleading competitions that progress to various regional levels during the course of the fall, which is the only way for a team to qualify for Varsity championships, which are held at Walt Disney World Resort in Orlando, Florida and nationals televised on ESPN2. - Economies of scale. Varsity employs the largest sales force in the industry, which has relationships with over 40,000 middle schools, high schools, colleges and 2,500 cheerleading gyms in all 50 states. The Company also hosts over 5,700 summer camps and approximately 300 national and regional competitions, with seven nationally-televised championships. As the market leader, Varsity also benefits from volume and critical mass efficiencies, namely spreading of fixed costs, negotiating power with suppliers, and an improved production process.").

[343] Murphy Report, ¶ 238.

expenses,' nor does he show or explain why he believes these costs—costs that are typical for a business in any industry—apply especially to competitive cheer markets."[344]

306. For my opinions that "[c]ompetitions have high start-up costs, including venue rentals, promotion and marketing expenses, and other fixed costs like paying employees, travel costs, and other business expenses," I cited to Varsity's general ledger.[345] The company's general ledger contains line-item cost accounting at the event level, meaning that individual cost items are reported for each event that Varsity hosted. I relied on this data in forming my opinion that such start-up costs existed and were high. Such costs may be typical for many businesses, but there can also be barriers to entry in many markets across industries. The question before us is whether the barriers to entry are significant, and whether Varsity's conduct, through its dominant market position, has increased the barriers to entry to the detriment of competition in the market.

307. While the data is reliable for some purposes, it is also incomplete and contains inconsistent entries. Dr. Murphy recognized these same flaws with the cost data.[346] Dr. Murphy states that changes over time to how costs were allocated prevented a consistent time series.[347] Such cost information was maintained in the ordinary course of business by Varsity's less-established rival event producers, including CSG and EPIC.[348] Thus, if Dr. Murphy insists that the determination of barriers to entry in the cheer competitions markets is based on an accounting of all events costs, then the lack of these data and subsequent analysis renders his position unsupported.[349]

308. Varsity's anticompetitive scheme, analyzed in its totality, was designed to inhibit entry and prevent expansion by rival event producers. This included the "attack events" strategy, as previously described, in which Varsity created "attack events" to counter-program events in

[344] Murphy Report, ¶ 239 (internal citations omitted).
[345] Heeb Report, ¶ 126, note 136.
[346] Murphy Deposition, November 4, 2022, 227:17-228:25.
[347] Murphy Deposition, November 4, 2022, 228:19-25 ("we talked to Mr. Landon about it, he kind of informed us of some of the various changes to the way things are done that happened over time, which kind of pushed us away from using a specific cost measure."). The company's statement is particularly odd, since the flaws in the GL data files are predominantly that numerous events do not have cost information, not that cost allocation methods changes over time. In fact, when compare costs at the event level (for which cost information was available) over time, the time series was consistent and did not exhibit any of the flaws that Dr. Murphy alleges made it unworkable.
[348] See Pre-Acquisition Data.
[349] Murphy Deposition, November 4, 2022, 229:1-14.

certain locations and dates to put its rivals out of business and make them easier to acquire;[350] the conditional rebate restrictions, as previously described, in which the incentives of the VFP and "Network" conditional rebates program forced rival event producers to offer steep discounts off Varsity prices in order to gain customers, including Varsity's predatory pricing conduct that required rival event producers to price below their average variable cost in order to gain customers (see Table 13 above). Even where the effects of these rebates is not sufficient in isolation to prevent entry or force exit, the conditions imposed by rebates strongly inhibit rivals from gaining customers. In addition, Varsity's. In addition, Varsity's exploitation of its relationship with venue owners and operators to require the venues to exclude rival event producers from hosting events for "60 days before or 90 days after" a Varsity event prevent or inhibit rivals from making inroads against Varsity.[351]

309. Further, Dr. Murphy claims, "Dr. Heeb also does not explain or provide evidence for his assertion that access to 'credible judges' constitutes a barrier to entry."[352] "Credible judges" are a finite resource and a necessary technological input into the production of a cheer competition.[353] If Varsity exerts control through its dominant market position over the supply of credible judges, then this can prevent these judges from working for Varsity's competitors. This would serve as a barrier to entry for rival event producers attempting to host cheer competitions.

310. Dr. Murphy also writes, "Dr. Heeb and Dr. Netz claim an entrant event producer needs a critical mass of teams. Plaintiffs' experts cite nothing that prevents teams from patronizing new entrants."[354]

311. The opinion that I wrote in my first report was not that an entrant event producer needs "a critical mass" of teams, but rather simply that an entrant event producer "must also have

[350] Deposition of Jim Hill, March 21, 2022, 118:2-14 ("To – to your question of attack events to maybe affect somebody's decision, there's one in particular that I can recall where the previous owner, Tammy Van Vleet, GSSA, and – Golden State Spirit Association. And she made this comment directly to me – and this is years ago – but, you know, 'I didn't want to sell, but I had to. You know, you guys were coming and it was either sell and – and get something out of it, or you put me out of business,' was her – was her terminology and opinion of why she chose to sell to Varsity when she did.").

[351] VAR00320890 (LeTard Exhibit 22), at -890 (email from Jeff Fowlkes to Tres LeTard dated Dec. 10, 2012: "The GWCC contacted me about several dates Billy requested which I was able to block because they were within the dates they protect for us. They do not allow anyone within 60 days before or 90 days after.").

[352] Murphy Report, ¶ 241 (internal citations omitted).

[353] Heeb Report, ¶ 126.

[354] Murphy Report, ¶ 242 (internal citations omitted).

access to teams."[355] This statement is tautological; to sell anything, a business must have customers. Dr. Murphy conflates consumer choice in the real world, in a market that Varsity has monopolized and in which I identify and quantify competitive harm, with consumer choice in the but-for world absent such conduct. In both worlds, consumers are not physically restrained from "patronizing new entrants," and we do, in fact, see evidence of gyms attending events operated by new entrants.[356] The relevant question is whether the economic incentives of gyms to attend rival events is distorted by the conduct of Varsity, to what degree, and how the economic incentives differ when compared to a hypothetical setting in which event prices and other terms of the service offering (rebates, discounts, etc.) are restrained by the competitive pressure of the fear of losing customers to a rival event producer. As described above, the incentives of the VFP and "Network" conditional rebates program forced rival event producers to offer steep discounts off Varsity prices in order to gain customers, or prevent them from gaining customers even when offering a superior value proposition, including Varsity's predatory pricing conduct that would require some rival event producers to price below their average variable cost in order to gain customers (see Table 13 above).[357]

312. Dr. Murphy writes that "the claim by Plaintiffs' experts that Worlds bid events are critical inputs to compete in All Star competition markets is incorrect. Likewise, the ability to award Summit bids does not constitute a barrier to entry."[358]

313. World Bids Events are, by the definition used by economists, a critical input for any event producer seeking to reach scale and be an effective competitor in the cheer competitions markets. Gyms seeking to attend Worlds are required to compete in a World Bids Event during that season. According to Dr. Murphy's own analysis, 80% of all registered participants at Varsity All-Star competitions attend at least one World Bids Event.[359]

314. The fact that World Bids Events are critical inputs was recognized by Varsity throughout its years of acquiring competing event producers, as its main strategy when identify target acquisitions was the ability to acquire World Bids Events (see Table 33 showing that Varsity

[355] Murphy Report, ¶ 242; Heeb Report, ¶ 126.
[356] Murphy Report, ¶ 242.
[357] Also see the extensive discussion of conditional rebates beginning at ¶ 273, and particularly ¶¶ 278-284.
[358] Murphy Report, ¶ 244 (internal citations omitted).
[359] Murphy Report, Exhibit 48.

acquired 25 of the 33 World Bids Events that it owned and operated following its 2018 acquisition of EPIC).

315. World Bids Events are critical inputs for any competitor to own in the cheer competitions markets, because there are only a fixed number of such events (42), and these events are mandatory for any team that seeks to compete in the Worlds competition. Hosting a World Bids Event conveys prestige and quality on the event producer. If Varsity monopolizes these critical inputs, then it will capture a significant share of the market, just based on customer preferences to qualify for the Worlds competition. Then Varsity can implement its conditional rebate programs across its customer base, including the customers that require a World Bids Event. Given the customers already attending a Varsity World Bids Event, the conditional rebate programs are designed such that attending further Varsity events leads to bigger rebates, which make it harder for rival event producers to compete for customers in the non-World Bids Events.

IV.B.3.c(ii) CHEER CAMPS

316. Dr. Murphy disputes the argument that Varsity's linking of opportunities to compete in its national competitions with participation in Varsity cheer camps generates an 'artificial' barrier to entry in cheer camps."[360] Since the national competitions are highly regarded events, new entrants to the cheer camps markets would have limited ability to win customers when competing against established Varsity camps with the additional ability to award bids to national championships.[361]

317. An email from the coach of a school team describes the anticompetitive effects of Varsity's restriction that leveraged their dominant position in the cheer competitions markets to the cheer camps markets: "It's frustrating that we MUST attend an NCA camp in order to attend their Nationals... I know in the end they will get more money but then that's a problem for smaller schools, even for my college team. We don't have the money to attend the camp to begin with and that's another reason we don't attend camp."[362]

318. Dr. Murphy writes, "Dr. Heeb and Dr. Netz also cite Varsity's Squad Credentialing program

[360] Murphy Report, ¶ 247 (internal citations omitted).
[361] Heeb Report, ¶ 183 (internal citations omitted).
[362] VAR00032440, at -444. Email from Billy Hoskins to Carrie Nichols (NCA State Director).

as a barrier to entry created by Varsity."[363] As I mentioned in my previous report, teams that wish to participate at NCA and UCA's school National Championships must have at least 75% of members complete the squad credentialing at a 2-day or longer Varsity camp.[364] Teams can participation in local NCA or UCA competitions without satisfying the squad credentialing requirement, but those teams would not be eligible to receive a bid to nationals.[365]

319. An email from a coach illustrates that safety is not the primary objective behind the squad credentialing requirement: "The marketing is great, 'certify your team so you're safe,' 'partnership with NFHS,' but I am AACCA certified, NFHS certified, and USASF certified through level 5, not to mention that I started coaching in 1995. When I got each of those certifications, you told me that was enough to do those exact same things, but all the sudden, it is not enough."[366]

320. Jeff Webb's remarks at the 2017 Varsity Spirit Rally highlighted that summer camp revenue increased $3.5 million in 2016, the year the credentialing program went into effect, "with significant growth across the country in every camp region."[367]

321. Dr. Murphy writes, "the camp-related barriers to entry asserted by Dr. Heeb and Dr. Netz, even if they were valid—which they are not—would not affect All Star customers simply because it is rare for All Star customers to attend such camps."[368] Dr. Murphy is correct in that it is rare for All-Star customers to attend camps, facts that I described in detail and reported in Table 3.[369] As I previously described, the cheer competitions markets include both All-Star and school teams, and the cheer camps markets include both All-Star and school teams. My evaluation of the competitive effects, therefore, is not limited to only certain customers in those markets. The cheer camps markets include mostly school customers, so I evaluate the full panoply of Varsity's anticompetitive conduct that affects customers in those markets, and consider any possible ties that Varsity uses to leverage market power from the cheer competitions markets to the cheer camps markets (such as the

[363] Murphy Report, ¶ 248 (internal citations omitted).
[364] Heeb Report, ¶ 226 (internal citations omitted).
[365] Heeb Report, ¶ 226 (internal citations omitted). See also, VAR00160802 (Duhon Exhibit 5), at -802.
[366] VAR00153399, at -401. Email with subject line NCA and the Varsity Spirit/NFHS Squad Credentialing Program!
[367] VAR00201278, at -293.
[368] Murphy Report, ¶ 249 (internal citations omitted).
[369] Heeb Report, Table 3.

credentialing requirement). Thus, since the customers in the cheer camps markets are mostly school teams, the economic analysis predominantly looks at the effects of Varsity's conduct on school teams.

322. I make no claims that All-Star teams would otherwise enter the cheer camps markets, but-for Varsity's conduct. All-Star teams have a different calendar and training plans relative to school customers. It is my understanding that being a Class Member as an indirect purchaser associated with an All-Star team does not require a person to have suffered antitrust injury in all three antitrust markets: cheer competitions markets, cheer camps markets, and cheer apparel market. If the parent of an athlete on an All-Star team never indirectly paid for registration for a Varsity cheer camp, then this does not diminish any antitrust injury that they suffered in any other markets.

IV.B.3.c(iii) CHEER APPAREL

323. Dr. Murphy writes, "Dr. Heeb cites 'finding production facilities, warehouses, inventory management, and distribution channels to serve customers' as barriers to entry. However, he does not provide any evidence to show that these costs are higher in cheer apparel than they are in the hundreds of other industries involving the manufacture and distribution of non-perishable goods, nor does he appear to account for the possibility of contract manufacturing or availability of overseas sources, both of which are common in manufacturing and distribution of non-perishable goods and may reduce costs."[370]

324. My opinions are not that the barriers to entry are larger in the cheer apparel market than in other apparel markets or other non-perishable goods markets. My opinions are simply that such barriers to entry are present in the cheer apparel market, and that their size and nature are one economic factor that contributes to Varsity's ability to charge supracompetitive prices in the cheer apparel market.[371] If it was costless for an apparel manufacturer to enter the cheer apparel market and immediately reach customers with the same quality products as sold by Varsity, then, as an economic matter, it would not be possible for Varsity to extract a 10.6% overcharge from its customers relative to a competitive benchmark.[372] The anticompetitive conduct aimed at the apparel market rivals and would-be rivals enhance and

[370] Murphy Report, ¶ 252 (internal citations omitted).
[371] Heeb Report, Tables 22 and 23.
[372] Heeb Report, Tables 22 and 23.

leverage the impact of these existing barriers to entry.

325. Dr. Murphy writes, "Dr. Heeb also cites 'specialty' and 'copyrighted or patented' designs, but fails to support that these are material barriers to entry for potential cheer apparel entrants."[373] My opinions related to copyright are based on a "Supreme Court decision from 2016, shared by Varsity's Chief Legal Officer Burton D. Brillhart with Jeff Webb in November 2016."[374] While the decision was ultimately rendered in favor of Varsity, one of the material facts of the case was that at that time (2016), Varsity had "acquired more than 200 U.S. copyright registrations for two-dimensional designs appearing on the surface of their uniforms and other garments."[375] I offer no opinions as to the legal questions of whether such copyrights are valid or to the legal rights that Varsity maintains as owner of such copyrights to enforce its intellectual property rights. All I opine is that copyrights of this nature are a barrier to entry, as any would-be entrant with a uniform design idea would need to invest resources to identify if its design ideas infringed on Varsity's trademarks, would need to invest resources to design-around Varsity's trademarks, or would need to invest resources to defend against any infringement suits brought by Varsity. For any of these situations, costs would be incurred by would-be entrants; hence, a barrier to entry into the cheer apparel market. This argument in no way depends upon those barriers having been illegally erected.

326. Dr. Murphy writes, "Dr. Heeb demonstrates that he is considering only *de novo* entry into the apparel space. He fails to consider that entry may instead come from firms already present in similar product spaces, such as general athletic apparel or other types of specialized apparel. Such potential entrants will likely have already established relationships with production facilities and warehouses, developed inventory management processes, and found access to distribution channels, so Dr. Heeb's purported barriers, even if they would apply to start-up businesses, would not impede suppliers already present in similar apparel markets."[376]

327. Established apparel manufacturers would have different costs to enter the cheer apparel market than start-up companies. My opinions in my first report are consistent with that fact.

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[373] Murphy Report, ¶ 252 (internal citations omitted).
[374] Heeb Report, ¶ 189 (citing VAR00272717, at -718).
[375] 580 U.S. _____ (2017).
[376] Murphy Report, ¶ 252 (internal citations omitted).

Based on the competitive dynamics in the cheer apparel market, namely which companies have entered and been successful, my opinions are that new entrants would tend to have a focus on sport competition apparel and specifically on cheer competition apparel. I have seen no evidence of entry or anticipated entry by general athletic apparel or other specialized apparel companies.

328. Dr. Murphy writes, "Dr. Heeb cites Varsity's policy of not allowing rival apparel companies to sell merchandise at Varsity events as a barrier to entry."[377] Later he writes, "[i]t suffices to note here that Dr. Heeb does not show that this policy disadvantages potential entrants given the presence of other distribution channels they could use, including other promoters' competitions and online platforms, such as Amazon."[378] This argument is unreasonable. Varsity's own rationale for the restriction demonstrates that Varsity recognizes the competitive value of access to apparel customers at cheer event. This link across product markets exploits Varsity's monopoly power in events to exert market power in apparel. Evidence from other competitors corroborates with this view.

329. Nfinity is an established cheer apparel manufacturer. Nfinity sells through "other promoters' competitions and online platforms, such as Amazon."[379] Yet, due to Varsity's restrictions, they are unable to sell their products at Varsity events. This constitutes a significant barrier to entry for would-be entrants and has constituted a significant barrier to further expansion for Nfinity. The evidence of Varsity's conduct and the effects on Nfinity are demonstrates in internal Nfinity email correspondences. First, in 2016, Varsity "reach[ed] out to [Nfinity] about the possibility of Varsity acquiring Nfinity" and Nfinity responded with acquisition options intended to "drive the revenue or the synergy of the Brand Nfinity with the distribution machine that is Varsity."[380] One aspect of distribution is the ability to reach customers at Varsity events. Second, in 2017, Varsity reached out to Nfinity to establish a distribution agreement in which Varsity would be an exclusive distributor for Nfinity products.[381] Under the proposed terms, Nfinity would sell five products "through Varsity and

[377] Murphy Report, ¶ 253 (internal citations omitted).
[378] Murphy Report, ¶ 253 (internal citations omitted).
[379] Murphy Report, ¶ 253.
[380] NFINITY000069, at -069 (DESIGNATED HIGHLY CONFIDENTIAL – EXPERT AND ATTORNEYS' EYES ONLY).
[381] NFINITY000071, at -074 (DESIGNATED HIGHLY CONFIDENTIAL – EXPERT AND ATTORNEYS' EYES ONLY).

Nfinity direct business only," meaning that Nfinity would be willing to forgo sales of those five products through alternative channels for the opportunity to sell via the Varsity sales channel.[382] Third, and finally, in 2021, Nfinity reached out to Varsity to establish a "sponsorship and on-sight vendor relationship for the 21-22 season."[383] That Nfinity had to establish a relationship (and pay for it) for the right to sell at Varsity events in the 2021-2022 season indicates that it did not have that privilege previously.

V. HARM TO COMPETITION

V.A. Varsity's Conspiracy with USASF to Monopolize

V.A.1. USASF and Varsity's roles in ensuring participant safety

330. Dr. Murphy writes, "[c]ontrary to Plaintiffs' experts' assertions, USASF's conduct is consistent with its role as a sanctioning organization for All Star cheer and has had procompetitive benefits that have contributed to the growth of All Star cheer. Plaintiffs' experts fail to provide any evidence of a 'conspiracy' between USASF and Varsity."[384]

331. Dr. Murphy performs no analysis and cites to no evidence, either empirical evidence or qualitative evidence, to support his claim that USASF's conduct "has had procompetitive benefits."[385]

332. In September 2020, "USA Today investigative reporters Marisa Kwiatkowski and Tricia Nadolny … broke the story about season one 'Cheer' star Jerry Harris being accused of soliciting sexually explicit photos and sex from minors. More than that, they found failures across the sport of competitive cheerleading, including how the governing body, the U.S. All Star Federation, delayed investigations and failed to prevent those accused or convicted of crimes from working in member gyms."[386]

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[382] NFINITY000071, at -074 (DESIGNATED HIGHLY CONFIDENTIAL – EXPERT AND ATTORNEYS' EYES ONLY).

[383] NFINITY000088, at -089 (DESIGNATED HIGHLY CONFIDENTIAL – EXPERT AND ATTORNEYS' EYES ONLY).

[384] Murphy Report, ¶ 256 (internal citations omitted).

[385] Murphy Report, ¶ 256.

[386] Nicole Carroll, "`Cheer' deals with Jerry Harris' arrest, but it was USA TODAY reporters who exposed the sport's problem. Here's how," USA TODAY, Jan. 21, 2022, accessed Dec. 1, 2022, available at: https://www.usatoday.com/story/opinion/2022/01/21/cheer-jerry-harris-netflix-sexual-misconduct-allegations/6586303001/; Marisa Kwiatkowski and Tricia Nadolny, "Jerry Harris from 'Cheer' under FBI investigation for allegedly soliciting sex from minors," USA TODAY, Sep. 14, 2020, accessed Dec. 1, 2022,

333. Also in September 2020, an article in the Memphis-based The Commercial Appeal newspaper cited to a USA Today documentary that found "nearly 180 individuals affiliated with cheerleading who have faced charges relating to sexual misconduct involving minors" and "[d]ozens of cheer coaches convicted of sex crimes not banned from sport."[387]

334. In September 2022, a Complaint was filed in US District Court (D.S.C.) against the owners of an All-Star gym in South Carolina (Rockstar Cheer) and various Varsity entities, including "Varsity Brands, LLC; Varsity Spirit, LLC; Varsity Brands Holding Company, Inc.; U.S. All Star Federation; Charlesbank Capital Partners, LP; Bain Capital, LP" alleging violations of the Federal sexual abuse law protecting minors.[388] The Complaint was amended later in September 2022 to additionally name as Defendants six more coaches at Rockstar Cheer: Kenny Feeley, Josh Guyton, Nathan Allan Plank, Christopher Hinton, Traevon Black, and Peter Holley.[389] Subsequently, lawsuits have been filed against other Varsity and other All-Star gyms and coaches in Federal courts in Tennessee, North Carolina, and Florida alleging violations of the Federal sexual abuse law protecting minors.[390]

335. Also, in September 2022, an 11-episode Apple podcast was released called "Cheer Incorporated" that covered institutional sex abuse scandal unearthed following Rockstar Cheer gym owner Scott Foster's suicide in late August 2022. According to the podcast producers, as more information surfaced it became apparent that Foster, as well as other

available at: https://www.usatoday.com/in-depth/news/investigations/2020/09/14/jerry-harris-cheerleader-netflix-cheer-fbi-investigation-search-warrant-alleged-sexual-misconduct/5741805002/.

[387] Daniel Connolly, "Cheer Empire: A For-profit Company Built Competitive Cheer, Pays People Who Make its Rules," Commercial Appeal, Sep. 18, 2020, accessed on Nov. 8, 2021, available at: https://www.commercialappeal.com/in-depth/news/2020/09/18/cheer-empire-profit-company-created-cheerleading-regulators-pays-salaries/3468551001/.

[388] Complaint, *Jane Doe 1 et al. Vs. Varsity Brands, LLC, et al.* (D.S.D., Greenville Division), Sept. 1, 2022 ; First Amended Complaint, *Jane Doe 1 et al. vs. Varsity Brands, LLC, et al.* (D.S.D., Greenville Division), Sept. 15, 2022.

[389] Clare Amari and Kathryn Casteel, "6 South Carolina coaches named in amended Rockstar Cheer sexual abuse lawsuit," USA TODAY, Sep. 16, 2022, accessed Dec. 1, 2022, available at: https://www.usatoday.com/story/news/nation/2022/09/15/rockstar-cheer-sexual-abuse-scandal-lawsuit-victims-coaches/10394866002/. See also First Amended Complaint, *Jane Doe 1 et al. vs. Varsity Brands, LLC, et al.* (D.S.D., Greenville Division), Sept. 15, 2022.

[390] Complaint, *Mary Doe vs. Varsity Brands, LLC, et al.* (W.D. Tenn., Western Division), Sept. 26, 2022; Complaint, *John Doe 1 vs. Varsity Brands, LLC, et al.* (E.D.N.C., Raleigh Division), Oct. 26, 2022; Complaint, *Jane Doe 1 vs. Varsity Brands, LLC, et al*. (M.D. Fla., Orlando Division), Nov. 17, 2022; Complaint, *Jane Doe 2 vs. Varsity Brands, LLC, et al*. (M.D. Fla., Orlando Division), Nov. 17, 2022; and Complaint, *Jane Doe 3 vs. Varsity Brands, LLC, et al*. (M.D. Fla., Orlando Division), Nov. 18, 2022. Varsity has threatened defamation lawsuits against the plaintiff attorneys in the South Carolina, Tennessee, North Carolina, and Florida lawsuits. See Letter from Thomas A. Clare, Clare Locke, LLP to Bakari Sellers, Strom Law Firm LLC, Nov. 1, 2022.

coaches, would soon be facing public allegations of sexual abuse of minors. Subsequently, lawsuits alleged that corporate entities and governing bodies responsible for ensuring the safety of cheer athletes engaged in years of cover-up of sexual abuse.[391]

336. Both the lawsuits and the podcast stem from "a child sex abuse scandal in competitive cheerleading [that followed] the Aug. 22 [2022] death of Scott Foster, a former cheerleading gym owner who died by suicide while reportedly under criminal investigation for having sex with minors in multiple states. Foster's South Carolina-based gym franchise, Rockstar Cheer and Dance, is a member of Varsity's top-tier 'Family Plan' rebate program. According to multiple sources, Rockstar regularly spends seven figures each year on Varsity events and uniforms. Foster had also previously sold a cheer competition company he owned, World Spirit Federation, to Varsity in 2006. … new lawsuits from Foster's alleged victims and their parents—one in federal court, one in South Carolina's Court of Common Pleas—accused Varsity and its affiliated companies of routinely turning a blind eye to credible allegations of sexual misconduct by Foster and other coaches against underage athletes."[392]

337. In response to the antitrust lawsuits, Varsity Spirit's President, Bill Seely, wrote a message in May 2020 to Varsity customers "in response to the frivolous, salacious and baseless lawsuit" and vowed that Varsity "will not stand idly by and allow some ambulance chasers and ineffective business owners to tarnish our good name. They want a fight, they will get a fight."[393] Varsity also hired a public relations company to assist with its messaging.[394]

338. Varsity has responded to the sexual abuse lawsuits and hired defamation attorneys threatening to sue the Plaintiffs' attorneys.[395] Varsity Spirit's President, Bill Seely, released a statement on Twitter on September 19, 2022, ahead of the competition season: "Athlete safety is at the forefront of everything we do. Many in our community are aware of recent reports of abuse, and they are horrifying. Any incident or allegation of this type of behavior is one too many, and we wholeheartedly support the survivors and their pursuit of justice against those responsible. However, any accusation that Varsity Spirit enabled such behavior

[391] Apple Podcasts, "Cheer Incorporated," Sept. 13, 2022 – Nov. 24, 2022, accessed on Dec. 1, 2022, available at: https://podcasts.apple.com/us/podcast/cheer-incorporated/id1644873988.
[392] Daniel Libit, "Varsity Cheerleading Faces Sex Abuse Claims Amid Antitrust Litigation," Sportico, Sep. 7, 2022, accessed on Dec. 1, 2022, available at: https://www.sportico.com/law/news/2022/varsity-brands-sex-abuse-claims-1234687582/.
[393] Webb_IPP_00001571, at -571, -574.
[394] VAR00275899.
[395] Letter from Thomas A. Clare, Clare Locke, LLP to Bakari Sellers, Strom Law Firm LLC, Nov. 1, 2022.

is unfounded. We know you share our commitment to providing a safe All Star environment for the athletes we serve."[396]

339. Varsity has intertwined itself and its employees into the governance of the USASF, decisions of which are highly relevant for the relative competitive position of Varsity compared to its rivals, and which are purported to be driven by a concern for athlete safety and not by a deference to Varsity's competitive interests. The safety of athletes in the competitive cheer ecosystem depends upon the independence and competent governance of USASF, which appears to have come under Varsity's monopolistic influence. Recent allegations of non-isolated incidences of abuse and sexual misconduct made in state and district courts through the Southeast, including allegations of misconduct, cover-up or negligence by USASF and/or Varsity, would tend to undermine the credibility of Varsity's arguments that athlete safety is the paramount concern.

V.A.2. USASF and Varsity's roles in restriction of competition

340. The concerns raised by the Independent Event Producers (IEP) in a series of letters to the USASF are evidence that Dr. Murphy does not consider when forming his opinions on USASF's conduct.[397] One such letter from the IEP, dated August 23, 2013, identifies the IEP's concerns related to Varsity's introduction of "The Summit" competition at Walt Disney World in late April, in the same location and shortly after the end of the Worlds competition: "One of the primary goals of the USASF should be to protect the interests of all of its members, making sure not to show bias or favoritism to any one group. It is not only clear to the members of the IEP, but the industry as a whole, that there was some sort of pre-arranged agreement to between the USASF and Varsity with regards to the sharing of these resources [between the Worlds competition and the subsequent "The Summit" competition]. That is a competitive advantage that the USASF has now provided to one particular company over all the other end-of-year events. It is situations much like these, which makes the

[396] Twitter, Varsity All Star (@VarsityAllStar), Sep. 19, 2022. See also Amanda Shaw, "Varsity All Star releases statement on safety ahead of cheerleading competition season", Sep. 21, 2022, accessed on Dec. 1, 2022, available at: https://www.foxcarolina.com/2022/09/21/varsity-all-star-releases-statement-safety-ahead-cheerleading-competition-season/.

[397] Heeb Report, beginning at ¶ 203.

industry question the integrity of the organization."[398]

341. A second such letter from the IEP, dated December 12, 2017, identifies IEP's concerns with USASF's coercive behavior: "As every event producer member of the USASF is a competitor in the all star market, actions taken in concert by these competitors has had an effect on the overall market. Decisions by the membership regarding price, concentration, and limitations on free and open competition in the market could be in violation of FTC guidelines governing Trade Associations. It is the opinion of the IEP that some recent actions by the USASF are a clear anti-competitive Group Boycott and are potentially in violation of United States antitrust law as well as the individual anti-competitive laws of several states in which the USASF operates. The membership of the IEP believes that the USASF has instituted anti-competitive policies that have forced every event producer member of the USASF to enter a conspiracy to Group Boycott "ALL" all star or instructional and competitive organizations who are not members of the USASF from attending individual USASF member's events. All, if not most of, the IEP Membership protested this new group boycott but did not have the voting percentage on the USASF Sanctioning Committee or a single vote on the USASF Board of Directors to prevent adoption of this USASF regulation. In fact, the USASF made it clear to IEP members that failure to comply with this new regulation would result in financial fines and penalties to IEP members."[399]

342. Factual evidence in this case confirms the close relationship between Varsity and USASF. USASF President, Jim Chadwick, and USASF Vice President, Steve Peterson, were employed full-time by Varsity while serving in their leadership roles at USASF, and both received significant financial compensation when Varsity was sold to Charlesbank in 2014 and later to Bain in 2018.[400]

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[398] VAR00339809, at -809 (letter from Shawn L. Smith, IEP, Chairman to Jim Chadwick, President, USASF, dated August 23, 2013). Varsity, in response to the letter, recommended that USASF "should use this opportunity to stop recognizing the IEP as an organization." See USASF_00055706 (Sep 2013 email from Jeff Fowlkes to Jim Chadwick, cc John Newby, re a USASF discussion about the August 2013 letter from the IEP complaining about USASF governance and seeking to "stop recognizing the IEP as an organization." Fowlkes noted, "[w]e don't often have the opportunity to be righteously indignant but I think this is certainly one." He saw "no reason to allow the trouble makers within that group to hide behind a coalition of other event producers. If there are any members we think are important to keep on board with USASF, we can reach out to them independently.").

[399] VAR00365866, at -866-867 (letter from "The IEP Membership" to U.S. All Star Federation, dated December 12, 2017).

[400] Murphy Deposition, November 3, 2022, 282:20-283:12; 288:24-289:21. Jim Chadwick had an employment contract with Varsity from 1996-2021, including from 2004-2021 when he was the President of USASF. See

V.B. Varsity's Expansion and Maintenance of Its Monopoly Power Through Acquisitions

343. Dr. Murphy states, "Plaintiffs' experts make several assertions related to Varsity's acquisitions of other event producers during and prior to the Class Period."[401] In his footnote to that statement, Dr. Murphy writes, "[n]either Dr. Heeb or Dr. Netz analyze or reference any acquisitions in cheer camps during the relevant time period. Dr. Heeb and Dr. Netz also reference Varsity's acquisition of Allgoods, LLC, described by Varsity in its press release announcing the acquisition as an 'apparel-oriented fundraising' company. However, this acquisition occurred before the start of the Class Period and neither Dr. Heeb nor Dr. Netz assert that this acquisition was anticompetitive or had any harmful effects on purported Class Members. Finally, Dr. Heeb asserts that 'Varsity's acquisition of apparel competitors diminished competition.' Dr. Heeb provides no analysis for this assertion, merely pointing to two documents that identified potential acquisition targets."[402]

344. The relevant Varsity acquisitions that I evaluate for the basis of my opinions include the eight acquisitions of event producers from 2014-2018 that I analyzed in my first report, including Cheer Ltd. in 2014 and JamBrands in 2015 and six event producers from 2016-2018, and additionally the 11 acquisitions of event producers from 2004-2012 that I have subsequently analyzed (see Attachment 3). Table 32 includes a summary of the descriptive information for each Varsity acquisition of a rival event producers from 2004-2018. As previously described, I opined in my first report that Varsity's acquisitions through 2014 (and certainly through 2016) allowed Varsity to acquire a dominant market position, and Varsity exploited this market power by charging monopolist prices as early as 2014 (and certainly by 2016).[403] Once Varsity is pricing at monopolist price levels, any further acquisitions would not lead to any further real price increase of its legacy events. Dr. Murphy's finding that the real prices

Deposition of Jim Chadwick, April 15, 2022, 41:1-19. Steve Peterson was an employee of Varsity since Varsity acquired National Spirit Group in 2004 and while he was the Vice President of USASF. Mr. Peterson earned $276,000 from the "Varsity Employee Stock Option Plan" when Varsity was acquired by Charlesbank in 2014 and "several hundred thousand dollars" from "Phantom Unit Plan" options when Varsity was acquired by Bain in 2018. See Deposition of Steve Peterson, March 9, 2022, 282:10-284:13; 287:15-288:21; 297:4-8; 306:15-22; 314:10-315:14.

[401] Murphy Report, ¶ 282 (internal citations omitted).

[402] Murphy Report, ¶ 282, note 491 (internal citations omitted).

[403] Heeb Report, ¶ 54 ("Whereas Varsity's market power was already, at the beginning of the Class Period (December 10, 2016 to present), uncompetitively high, this [anticompetitive acquisitions of competitors] conduct also sustained, preserved and extended that monopoly power.").

of Varsity's legacy events did not rise coincident with any of its six acquisitions from 2016-2018 is entirely consistent with my opinion that Varsity had established market power and charged monopolist prices by 2016. This market power was acquired through anticompetitive acquisitions of competitors, starting as early as 2004 (see Table 32 for a summary of all Varsity acquisitions from 2004-2018).

345. I separately address anticompetitive effects in the cheer camps markets and the cheer apparel market.[404] I identify Varsity's acquisitions of "BSN in 2013 and allgoods LLC in 2015."[405] However, I do not have data on these acquisitions, so they do not factor into my empirical analysis of the effects of the acquisitions.

346. Dr. Murphy states that his "review of the available pre- and post-acquisition performance of the acquired events confirms that Varsity's acquisitions during the damages period were generally pro-competitive."[406] After describing his analysis as reported in his Exhibit 45, Dr. Murphy identifies the sole basis for his conclusion that the acquisitions were pro-competitive: "total attendance increased across these brands post-acquisition, even when accounting for closed events."[407]

347. Dr. Murphy's statement about attendance increases is incorrect as a matter of fact. The seven acquired brands for which pre-acquisition data are available include: Aloha (acquired December 2016), All Things Cheer (acquired April 2017), Champion Spirit (acquired November 2017), EPIC (acquired January 2018), JamBrands (acquired November 2015), Mardi Gras Spirit (acquired December 2017), and Spirit Celebration (acquired February 2017). For each of these seven event brand companies, I calculate the total number of athletes in that company's events in the final season for which data is available prior to acquisition and compare the "before count" to the total number of athletes in the event brand's events in the first season of Varsity pricing control (the "after count"). Table 14 below reports the results of the "before and after" analysis of participation for acquired brand events.

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[404] See Heeb Report, VI.C.4. for analysis of the anticompetitive effects in the five cheer camps regional markets. See Heeb Report, VI.D.2. for analysis providing direct evidence of the anticompetitive effects in the cheer apparel market (price overcharge of Varsity products relative to a competitor benchmark).

[405] Heeb Report, ¶ 94.

[406] Murphy Report, ¶ 292.

[407] Murphy Report, ¶ 295.

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Table 14. Athlete Counts for Acquired Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Data	Season	Total Participation Before Acquisition	Total Participation After Acquisition	Participation Change	Participation Percentage Change
ALO	12/15/2016	2016-2017	2017-2018	27,186	17,962	(9,224)	-33.9%
			2018-2019	27,186	15,683	(11,503)	-42.3%
ATC	4/21/2017	2016-2017	2017-2018	2,730	3,636	906	33.2%
			2018-2019	2,730	5,063	2,333	85.5%
CSG	11/15/2017	2016-2017	2018-2019	21,668	9,076	(12,592)	-58.1%
EPIC	1/19/2018	2016-2017	2018-2019	69,525	46,410	(23,115)	-33.2%
JF	11/2/2015	2014-2015	2016-2017	186,624	95,105	(91,519)	-49.0%
			2017-2018	186,624	121,516	(65,108)	-34.9%
			2018-2019	186,624	118,757	(67,867)	-36.4%
MGS	12/1/2017	2016-2017	2018-2019	8,767	10,094	1,327	15.1%
SCB	2/28/2017	2016	2017-2018	24,530	17,181	(7,349)	-30.0%
			2018-2019	24,530	13,602	(10,928)	-44.5%
TOTAL - Year 1 Only				**341,030**	**199,464**	**(141,566)**	**-41.5%**

Sources: Varsity Registration Data; Pre-Acquisition Data.

348. As shown in Table 14 above, total participation (as measured by total registrations) changed from the last year of pre-acquisition to the first year of Varsity pricing control as follows: Aloha participation decreased by 34%, All Things Cheer participation increased by 33%, CSG participation decreased by 58%, EPIC participation decreased by 33%, JamBrands participation decreased by 49%, Mardi Gras Spirit participation increased by 15%, and Spirit Celebration participation decreased by 30%. In total, summed across all seven acquired brands and all the acquired brand events for these brand companies, participation (as measured by total registrations) decreased from the last year of pre-acquisition to the first year of Varsity pricing control by 141,566 athlete registrations, which was equal to a 42% decrease in participation (see Table 14 above).

349. The acquisitions analyzed (as shown Table 14 above) are the seven rival event producers that Varsity acquired from 2015-2018: JAM Brands, Spirit Celebration, All Things Cheer, Aloha, Mardi Gras Spirit, Champion Spirit Group, and EPIC. The other events that Varsity owned and operated during this period were its legacy events, previously defined as the events that Varsity owned and operated prior to 2014, and the Cheer Ltd. (CL) acquired brand events that Varsity acquired with its acquisition of Cheer Ltd. in June 2014. Table 15 below shows

that the athlete participation in the Varsity legacy and CL events was higher in the 2014-2015 season than in the 2018-2019 season. The total athlete participation in the Varsity legacy and CL events increased slightly from the 2014-2015 season to the 2015-2016 season, but then decreased over the next two seasons, and only increased slightly from the 2017-2018 season to the 2018-2019 season. The overall effect is that the total athlete participation in the Varsity legacy and CL events in the 2018-2019 season was 8,948 entrants smaller than the total athlete participation in the 2014-2015 season (2.1% decrease).

Table 15. Total Athlete Participation for Legacy and CL Events, 2014-2015 Season Through 2018-2019 Season

Brand	Season	Total Participation	Participation Percentage Change
Legacy/CL	2014-2015	427,980	
	2015-2016	433,427	1.3%
	2016-2017	428,112	-1.2%
	2017-2018	414,693	-3.1%
	2018-2019	419,032	1.0%

Sources: Varsity Registration Data.

Notes: Events include all events acquired by Varsity prior to 2015, including Cheer Ltd. events acquired in 2014.

350. Dr. Murphy presents the empirical facts related to acquired brand events in his Exhibit 45. However, he omits several important empirical facts for acquired brand events related to events that Varsity discounted. Including analysis of those omitted events would change the conclusions of his analysis. First, Dr. Murphy reports only “Average Athlete Participation” per event and not “Total Athlete Participation.” The relevant measure for consumer welfare is “Total Athlete Participation.” Second, Dr. Murphy only reports the percentage changes in “Average Athlete Participation” and “Real Average Price per Athlete” for the “Continued” events, but not for the “Unmatched” events (or the “All Events” total at the bottom of his Exhibit 45). Third, Dr. Murphy does not report the percentage change in the number of events. This is important since Varsity cancelled a significant number of acquired brand events. Fourth, and finally, Dr. Murphy does not include the 2015 acquisition of JAM Brands in his analysis. These are flaws with the design and reporting of his Exhibit 45.

351. In addition to the design flaws, Dr. Murphy uses incorrect data inputs in constructing his

Exhibit 45. Without explanation in his report, Dr. Murphy's backup materials indicate that he created his own data inputs for the athlete participation counts. In creating his athlete participation counts, Dr. Murphy undercounts participation in the pre-acquisition data (based on raw data inputs from the registration records of rival event producers) and exaggerates participation in the post-acquisition data (based on raw data inputs from Varsity's registration records). Dr. Murphy's data inputs are incorrect and unreliable.

352. I correct the design flaws in Dr. Murphy's Exhibit 45 and use accurate and reliable data inputs for my calculations of the acquired brand effects (as presented in Table 18 below). To create a correct version of Exhibit 45, I correct Dr. Murphy's analysis in three steps. In all three steps, I define prices in the same way as Dr. Murphy: I define net fees as registration revenues less discounts and less rebates (consistent with Dr. Murphy's approach), then define nominal prices as the average net fees per athlete, and finally adjust for inflation to define real prices.

353. The first correction is to add a row for "All Brand Events" that reports the totals for both "Continued" and "Unmatched" events for that brand. The second correction is to report "Percentage Changes" for the "Unmatched" events and for the "All Brand Events" and the "All Events" in the "Total" row at the bottom of Dr. Murphy's Exhibit 45. Dr. Murphy, as previously described, only reports "Percentage Changes" for the "Continued" events in his Exhibit 45, and this ignores the relevant economic dynamics for the events that Varsity chose to discontinue.

354. The third correction is to report "Total Athlete Participation" alongside "Average Athlete Participation." The new variable "Total Athlete Participation" equals the product of "Number of Events" and "Average Athlete Participation." Dr. Murphy and my opinions on athlete participation are based on "Total Athlete Participation" and not "Average Athlete Participation." It is irrelevant if the average participation increases 31% post-acquisition if there are 22% fewer events (see Table 16 below). The relevant information is that total participation increases by only 1.5% (see Table 16 below).

355. In addition to reporting "Total Athlete Participation," with complete information for "Pre-Acquisition," "Post-Acquisition," and the "Percentage Change" categories, I further report the "Percentage Change" for the "Number of Events." The "Percentage Change" for the "Number of Events" equals 0% for the "Continued" events, but the "Percentage Change" for

the "Unmatched" events is very informative as a measure of the degree of Varsity's event cancellations. For example, across all six acquisitions (Spirit Celebration, All Things Cheer, Aloha, Mardi Gras Spirit, Champion Spirit Group, and EPIC), Varsity cancelled 67% of the "Unmatched" events and 22% of events overall (see Table 16 below).

356. As shown in Table 16 below (and highlighted in a bolded box), the "Total Athlete Participation" for all acquired brand events for these six acquisitions increased by only 1.5%. All numbers in Table 16 below are the exact data inputs from Dr. Murphy's Exhibit 45 for "Number of Events," "Average Athlete Participation," and "Real Average Price per Athlete." I added the new variable "Total Athlete Participation," equal to the product of "Number of Events" and "Average Athlete Participation," added "Percentage Change" for "Number of Events," and calculated totals for "All Brand Events" using Dr. Murphy's data inputs. Even using Dr. Murphy's inputs, the "Total Athlete Participation" only increased 1.5%.

Table 16. Amendment 1 to Murphy Exhibit 45: Including Information on Total Athlete Participation

		Period Studied		Pre-Acquisition				Post-Acquisition				Percentage Change			
Acquired Brand		From	To	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete
Spirit Celebration	Continued	2015/2016	2017/2018	9	2,081	18,729	$67.28	9	1,977	17,793	$82.50		-5%	-5%	23%
	Unmatched	2015/2016	2017/2018	3	1,526	4,578	$59.99	1	1,436	1,436	$103.74	-67%	-6%	-69%	73%
	All Brand Events	2015/2017	2017/2019	12	1,942	23,307	$65.85	10	1,923	19,229	$84.09	-17%	-1%	-17%	28%
All Things Cheer	Continued	2015/2016	2017/2018	2	1,164	2,328	$90.92	2	1,756	3,512	$90.01		51%	51%	-1%
	Unmatched	2015/2016	2017/2018	2	584	1,168	$41.52	1	689	689	$89.13	-50%	18%	-41%	115%
	All Brand Events	2015/2017	2017/2019	4	874	3,496	$74.42	3	1,400	4,201	$89.87	-25%	60%	20%	21%
Aloha	Continued	2015/2016	2017/2018	15	1,223	18,345		15	1,298	19,470	$90.13		6%	6%	
	Unmatched	2015/2016	2017/2018	10	739	7,390		1	1,876	1,876	$99.10	-90%	154%	-75%	
	All Brand Events	2015/2017	2017/2019	25	1,029	25,735		16	1,334	21,346	$90.92	-36%	30%	-17%	
Mardi Gras Spirit	Continued	2016/2017	2018/2019	7	953	6,671	$73.14	7	1,472	10,304	$78.21		54%	54%	7%
	Unmatched	2016/2017	2018/2019	4	524	2,096	$77.76	1	753	753	$74.28	-75%	44%	-64%	-4%
	All Brand Events	2016/2018	2018/2020	11	797	8,767	$74.24	8	1,382	11,057	$77.94	-27%	73%	26%	5%
Champion Spirit Group	Continued	2016/2017	2018/2019	14	1,207	16,898	$62.32	14	1,748	24,472	$76.35		45%	45%	23%
	Unmatched	2016/2017	2018/2019	11	434	4,774	$47.52	2	1,208	2,416	$43.55	-82%	178%	-49%	-8%
	All Brand Events	2016/2018	2018/2020	25	867	21,672	$59.06	16	1,681	26,888	$73.40	-36%	94%	24%	24%
EPIC	Continued	2016/2017	2018/2019	55	1,112	61,160	$71.66	55	1,164	64,020	$72.45		5%	5%	1%
	Unmatched	2016/2017	2018/2019	21	436	9,156	$50.26	11	805	8,855	$54.98	-48%	85%	-3%	9%
	All Brand Events	2016/2018	2018/2020	76	925	70,316	$68.87	66	1,104	72,875	$70.33	-13%	19%	4%	2%
Total	Continued			102	1,217	124,131	$69.91	102	1,368	139,571	$75.74		12%	12%	8%
	Unmatched			51	572	29,162	$53.88	17	943	16,025	$60.67	-67%	65%	-45%	13%
	All Events			153	1,002	153,293	$67.18	119	1,308	155,596	$74.15	-22%	31%	$\boxed{1.5\%}$	10%

Sources: Varsity Registration Data; Pre-Acquisition Data.

357. The second step incorporates the corrections in the first step plus the inclusion of information for the 2015 JAM Brands acquisition. Dr. Murphy ignored the JAM Brands acquisition in his analysis. The results after including the effects of the JAM Brand acquisition are reported in Table 17 below. The numbers for the six acquisitions (Spirit Celebration, All Things

Cheer, Aloha, Mardi Gras Spirit, Champion Spirit Group, and EPIC) are identical to Table 16 above. The information for JAM Brands is based on applying Dr. Murphy's variables and calculations to my data inputs. The "Total" rows are updated to include the relevant information now totaled over seven acquisitions, the six analyzed by Dr. Murphy plus JAM Brands.

358. As shown in Table 17 below, there were significant anticompetitive effects from the JAM Brand acquisitions, both in terms of an increase in the real price and in terms of a decrease in the total athlete participation. Including JAM Brands in the "Total," as shown in Table 17 below (and highlighted in a bolded box), the "Total Athlete Participation" for all acquired brand events for these seven acquisitions **decreased** by 26.2%. All numbers in Table 17 below are the exact data inputs from Dr. Murphy's Exhibit 45 for the six acquisitions (Spirit Celebration, All Things Cheer, Aloha, Mardi Gras Spirit, Champion Spirit Group, and EPIC). I added information for the JAM Brands acquisition. Even using Dr. Murphy's inputs, the "Total Athlete Participation" **decreased** by 26.2%.

Table 17. Amendment 2 to Murphy Exhibit 45: Including Information for the JAM Brands Acquisition

Acquired Brand		Period Studied		Pre-Acquisition				Post-Acquisition				Percentage Change			
		From	To	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete
JAM Brands	Continued	2014/2015	2016/2017	42	2,117	88,923	$91.43	42	1,693	71,114	$104.07		-20%	-20%	14%
	Unmatched	2014/2015	2016/2017	68	1,437	97,701	$59.96	25	960	23,991	$69.99	-63%	-33%	-75%	17%
	All Brand Events	2014/2015	2016/2017	110	1,697	186,624	$74.95	67	1,419	95,105	$95.47	-39%	-16%	-49%	27%
Spirit Celebration	Continued	2015/2016	2017/2018	9	2,081	18,729	$67.28	9	1,977	17,793	$82.50		-5%	-5%	23%
	Unmatched	2015/2016	2017/2018	3	1,526	4,578	$59.99	1	1,436	1,436	$103.74	-67%	-6%	-69%	73%
	All Brand Events	2015/2017	2017/2019	12	1,942	23,307	$65.85	10	1,923	19,229	$84.09	-17%	-1%	-17%	28%
All Things Cheer	Continued	2015/2016	2017/2018	2	1,164	2,328	$90.92	2	1,756	3,512	$90.01		51%	51%	-1%
	Unmatched	2015/2016	2017/2018	2	584	1,168	$41.52	1	689	689	$89.13	-50%	18%	-41%	115%
	All Brand Events	2015/2017	2017/2019	4	874	3,496	$74.42	3	1,400	4,201	$89.87	-25%	60%	20%	21%
Aloha	Continued	2015/2016	2017/2018	15	1,223	18,345		15	1,298	19,470	$90.13		6%	6%	
	Unmatched	2015/2016	2017/2018	10	739	7,390		1	1,876	1,876	$99.10	-90%	154%	-75%	
	All Brand Events	2015/2017	2017/2019	25	1,029	25,735		16	1,334	21,346	$90.92	-36%	30%	-17%	
Mardi Gras Spirit	Continued	2016/2017	2018/2019	7	953	6,671	$73.14	7	1,472	10,304	$78.21		54%	54%	7%
	Unmatched	2016/2017	2018/2019	4	524	2,096	$77.76	1	753	753	$74.28	-75%	44%	-64%	-4%
	All Brand Events	2016/2018	2018/2020	11	797	8,767	$74.24	8	1,382	11,057	$77.94	-27%	73%	26%	5%
Champion Spirit Group	Continued	2016/2017	2018/2019	14	1,207	16,898	$62.32	14	1,748	24,472	$76.35		45%	45%	23%
	Unmatched	2016/2017	2018/2019	11	434	4,774	$47.52	2	1,208	2,416	$43.55	-82%	178%	-49%	-8%
	All Brand Events	2016/2018	2018/2020	25	867	21,672	$59.06	16	1,681	26,888	$73.40	-36%	94%	24%	24%
EPIC	Continued	2016/2017	2018/2019	55	1,112	61,160	$71.66	55	1,164	64,020	$72.45		5%	5%	1%
	Unmatched	2016/2017	2018/2019	21	436	9,156	$50.26	11	805	8,855	$54.98	-48%	85%	-3%	9%
	All Brand Events	2016/2018	2018/2020	76	925	70,316	$68.87	66	1,104	72,875	$70.33	-13%	19%	4%	2%
Total	Continued			144	1,480	213,054	$78.89	144	1,463	210,685	$85.30		-1%	-1%	8%
	Unmatched			119	1,066	126,863	$58.56	42	953	40,016	$66.26	-65%	-11%	-68%	13%
	All Events			263	1,292	339,917	$71.30	186	1,348	250,701	$82.26	-29%	4%	**-26.2%**	15%

Sources: Varsity Registration Data; Pre-Acquisition Data.

359. The third and final step involves correcting Dr. Murphy's data inputs. Nowhere in Dr. Murphy's report does he critique my data inputs for the athlete participation counts. Yet,

without reason or justification in his report, his backup materials indicate that he created his own data inputs for the athlete participation counts. In creating his athlete participation counts, Dr. Murphy undercounts the number of entrants in the pre-acquisition data (based on raw data inputs from the registration records of rival event producers) and exaggerates the number of entrants in the post-acquisition data (based on raw data inputs from Varsity's registration records).[408] Further, Dr. Murphy includes "Dance Studio" and "Youth" teams in his calculation of total participation at Varsity events post-acquisition.[409] The athletes from "Dance Studio" and "Youth" teams are not part of the Class in this investigation. Including teams other than All-Star teams incorrectly inflates the number of entrants in the post-acquisition data. Dr. Murphy's data inputs are incorrect and unreliable.

360. To create the final version of the corrected Exhibit 45 (as shown in Table 18 below), I apply the same corrections as in the first step (Table 16) and the second step (Table 17), and additionally replace Dr. Murphy's incorrect data inputs with my correct data inputs. I include "Totals" (as shown in Table 18 below) for both the six acquisitions analyzed by Dr. Murphy and for the seven acquisitions that additionally include JAM Brands.

361. Including correct data inputs, as shown in Table 18 below (and highlighted in bolded boxes), the "Total Athlete Participation" for the six acquisitions analyzed by Dr. Murphy **decreased** by 32.4% and the "Total Athlete Participation" for the seven acquisitions that additionally includes JAM Brands **decreased** by 41.5%.

[408] As noted in my first report, "I use the term 'entrant' to refer to each instance a unique athlete/participant attends an event." See Heeb Report, ¶ 35, note 11. Dr. Murphy uses the terms "athletes" or "athlete participation" in an equivalent manner as I use the term "entrant."

[409] The pre-acquisition data only includes athletes on All-Star teams, which are the members of the Class, and does not include athletes on "Dance Studio" or "Youth" teams, which are not members of the Class.

Table 18. Corrected Murphy Exhibit 45: Summary of Participation & Price Changes for Acquired Competitions Pre- and Post-Acquisition

		Period Studied		Pre-Acquisition				Post-Acquisition				Percentage Change			
Acquired Brand		From	To	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete
JAM Brands	Continued	2014/2015	2016/2017	42	2,117	88,923	$91.43	42	1,693	71,114	$104.07		-20%	-20%	14%
	Unmatched	2014/2015	2016/2017	68	1,437	97,701	$59.96	25	960	23,991	$69.99	-63%	-33%	-75%	17%
	All Brand Events	2014/2015	2016/2017	110	1,697	186,624	$74.95	67	1,419	95,105	$95.47	-39%	-16%	-49%	27%
Spirit Celebration	Continued	2016	2017/2018	9	2,139	19,252	$64.77	9	1,762	15,856	$84.86		-18%	-18%	31%
	Unmatched	2016	2017/2018	3	1,759	5,278	$44.52	1	1,325	1,325	$73.37	-67%	-25%	-75%	65%
	All Brand Events	2016	2017/2018	12	2,044	24,530	$60.41	10	1,718	17,181	$83.97	-17%	-16%	-30%	39%
All Things Cheer	Continued	2016/2017	2017/2018	2	1,011	2,022	$76.39	2	1,542	3,083	$97.85		52%	52%	28%
	Unmatched	2016/2017	2017/2018	2	354	708	$43.60	1	553	553	$103.01	-50%	56%	-22%	136%
	All Brand Events	2016/2017	2017/2018	4	683	2,730	$67.89	3	1,212	3,636	$98.63	-25%	78%	33%	45%
Aloha	Continued	2016/2017	2017/2018	15	1,058	15,875	$99.30	15	1,093	16,397	$99.01		3%	3%	0%
	Unmatched	2016/2017	2017/2018	10	1,131	11,311	$73.80	1	1,565	1,565	$113.04	-90%	38%	-86%	53%
	All Brand Events	2016/2017	2017/2018	25	1,087	27,186	$88.69	16	1,123	17,962	$100.23	-36%	3%	-34%	13%
Mardi Gras Spirit	Continued	2016/2017	2018/2019	7	953	6,670	$72.00	7	1,336	9,352	$79.69		40%	40%	11%
	Unmatched	2016/2017	2018/2019	4	524	2,097	$73.53	1	742	742	$69.64	-75%	42%	-65%	-5%
	All Brand Events	2016/2017	2018/2019	11	797	8,767	$72.37	8	1,262	10,094	$78.95	-27%	58%	15%	9%
Champion Spirit Group	Continued	2016/2017	2018/2019	7	1,041	7,289	$71.49	7	1,137	7,959	$95.11		9%	9%	33%
	Unmatched	2016/2017	2018/2019	18	799	14,379	$51.92	2	559	1,117	$76.39	-89%	-30%	-92%	47%
	All Brand Events	2016/2017	2018/2019	25	867	21,668	$58.50	9	1,008	9,076	$92.81	-64%	16%	-58%	59%
EPIC	Continued	2016/2017	2018/2019	51	1,138	58,018	$69.89	51	716	36,510	$78.65		-37%	-37%	13%
	Unmatched	2016/2017	2018/2019	23	500	11,507	$56.05	18	550	9,900	$55.64	-22%	10%	-14%	-1%
	All Brand Events	2016/2017	2018/2019	74	940	69,525	$67.60	69	673	46,410	$73.74	-7%	-28%	-33%	9%
Total (excl. JAM Brands)	Continued			91	1,199	109,126	$73.62	91	980	89,157	$85.74		-18%	-18%	16%
	Unmatched			60	755	45,280	$58.44	24	633	15,202	$67.02	-60%	-16%	-66%	15%
	All Events			151	1,023	154,406	$69.17	115	907	104,359	$83.01	-24%	-11%	**-32.4%**	20%
Total	Continued			133	1,489	198,049	$81.62	133	1,205	160,271	$93.87		-19%	-19%	15%
	Unmatched			128	1,117	142,981	$59.48	49	800	39,193	$68.84	-62%	-28%	-73%	16%
	All Events			261	1,307	341,030	$72.34	182	1,096	199,464	$88.95	-30%	-16%	**-41.5%**	23%

Sources: Varsity Registration Data; Pre-Acquisition Data.

362. As reported in Table 18 above, "Real Average Price per Athlete" (the variable defined by Dr. Murphy for his Exhibit 45) increased for the "Continued" events by 16% and 15% (excluding JAM Brands vs. including JAM Brands) and increased for the "Unmatched" events by 15% and 16% (excluding JAM Brands vs. including JAM Brands). The overall effect is that "Real Average Price per Athlete" increased for "All Events" by 20% (when excluding the JAM Brands acquisition) and by 23% (when including the JAM Brands acquisition). These real price increases are substantial and demonstrate anticompetitive effects of Varsity's conduct related to acquisitions of rival event producers.

363. As reported in Table 18 above, "Total Athlete Participation" decreased for the "Continued" events by 18% and 19% (excluding JAM Brands vs. including JAM Brands) and decreased for the "Unmatched" events by 66% and 73% (excluding JAM Brands vs. including JAM Brands). The overall effect is that "Total Athlete Participation" decreased for "All Events" by 32% (when excluding the JAM Brands acquisition) and by 42% (when including the JAM Brands acquisition). This fact undermines Dr. Murphy's lone basis for his opinions on the competitive effects of the acquisitions: "total attendance increased across these brands post-

acquisition, even when accounting for closed events."[410] Total attendance does not increase, as Dr. Murphy contends, but substantially decreases.

364. Table 18 above summarizes the empirical facts for the acquired brand events in terms of both changes in real prices and changes in total participation. The acquisitions analyzed are the seven rival event producers that Varsity acquired from 2015-2018: JAM Brands, Spirit Celebration, All Things Cheer, Aloha, Mardi Gras Spirit, Champion Spirit Group, and EPIC. The other events that Varsity owned and operated during this period were its legacy events, previously defined as the events that Varsity owned and operated prior to 2014, and the Cheer Ltd. (CL) acquired brand events that Varsity acquired with its acquisition of Cheer Ltd. in June 2014. These Varsity legacy and CL events can be divided into two event types, using the exact same definitions as with the acquired brand events: "Continued" events between one season and the next are events that Varsity operates in both seasons; and "Unmatched" events include events that are either operated only in the first season (and discontinued) or are only operated in the second season (as a new event). Within those two event types, I consider the changes in "Number of Events," "Average Athlete Participation," "Total Athlete Participation", and "Real Average Price per Athlete" (similar to Dr. Murphy's Exhibit 45) for the periods as analyzed in the acquired brand events analysis (see Table 18 above): changes from the 2014-2015 season to the 2015-2016 season; changes from the 2015-2016 season to the 2016-2017 season; changes from the 2016-2017 season to the 2017-2018 season; changes from the 2017-2018 season to the 2018-2019 season; and finally changes across the 4-year period from the 2014-2015 season to the 2018-2019 season. The empirical facts for the Varsity legacy and CL events over those seasons, in terms of changes in real prices and changes in participation, are reported in Table 19.

[410] Murphy Report, ¶ 295.

Table 19. Murphy Exhibit 45 Information for Varsity Events Acquired Prior to 2015 ("Legacy Events")

Period Studied		Pre-Acquisition				Post-Acquisition				Percentage Change			
		Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete
From 2014-2015 to 2015-2016	Continued	224	1,880	421,173	$89.02	224	1,851	414,696	$92.98		-2%	-2%	4%
	Unmatched	17	400	6,807	$67.60	19	568	10,784	$87.37	12%	42%	58%	29%
	Total	241	1,776	427,980	$88.68	243	1,751	425,480	$92.84	1%	-1%	-1%	5%
From 2015-2016 to 2016-2017	Continued	224	1,859	416,339	$93.17	224	1,705	381,881	$96.70		-8%	-8%	4%
	Unmatched	19	481	9,141	$77.80	14	514	7,201	$81.48	-26%	7%	-21%	5%
	Total	243	1,751	425,480	$92.84	238	1,635	389,082	$96.42	-2%	-7%	-9%	4%
From 2016-2017 to 2017-2018	Continued	210	1,768	371,272	$97.80	210	1,706	358,297	$98.21		-3%	-3%	0%
	Unmatched	28	636	17,810	$67.63	17	683	11,610	$76.26	-39%	7%	-35%	13%
	Total	238	1,635	389,082	$96.42	227	1,630	369,907	$97.52	-5%	0%	-5%	1%
From 2017-2018 to 2018-2019	Continued	206	1,760	362,509	$98.27	206	1,736	357,522	$100.06		-1%	-1%	2%
	Unmatched	21	352	7,398	$60.76	23	644	14,804	$59.57	10%	83%	100%	-2%
	Total	227	1,630	369,907	$97.52	229	1,626	372,326	$98.45	1%	0%	1%	1%
From 2014-2015 to 2018-2019	Continued	185	2,084	385,465	$91.72	185	1,792	331,462	$100.59		-14%	-14%	10%
	Unmatched	56	759	42,515	$61.08	44	929	40,864	$81.04	-21%	22%	-4%	33%
	Total	241	1,776	427,980	$88.68	229	1,626	372,326	$98.45	-5%	-8%	**-13.0%**	11%

Sources: Varsity Registration Data.

365. As reported in Table 19 above, "Total Athlete Participation" for the Varsity legacy and CL events decreased by 1% from the 2014-2015 season to the 2015-2016 season; decreased by 9% from the 2015-2016 season to the 2016-2017 season; decreased by 5% from the 2016-2017 season to the 2017-2018 season; and increased by 1% from the 2017-2018 season to the 2018-2019 season. Overall, across the 4-year period from the 2014-2015 season to the 2018-2019 season, "Total Athlete Participation" decreased by 13.0% (see the bold cell in Table 19 above).

366. In sum, for the acquired brand events, real prices increased by 20%, on average, and total participation decreased by 42% (see Table 18); for Varsity's legacy events, total participation decreased (see Table 19); and therefore across all events that Varsity came to control by the end of the Class Period, real prices went up and total participation (output) went down, which demonstrate harm to competition.

367. Dr. Murphy concludes, "Plaintiffs and their experts ignore the overall net benefit to consumers that accompanied the acquisitions, claiming instead that the acquisitions generally allowed Varsity to raise prices and reduce output and quality. As I demonstrated above and explain below in greater detail, these allegations are unfounded and the economic analysis put forth by Plaintiffs' experts to support them is unreliable."[411]

[411] Murphy Report, ¶ 296 (internal citations omitted)

368. Dr. Murphy does not analyze or calculate the overall net benefit. He focuses exclusively on the total participation changes and uses his incorrect calculations of total participation changes as the sole basis to conclude that the real price increases implemented by Varsity can be justified as the economic outcome from Varsity operating more desirable and higher quality events. Fundamentally, his basis for this opinion is incorrect, as Dr. Murphy makes significant errors in his calculations of the total participation changes. In fact, total participation did not increase, as Dr. Murphy alleges, but decreased by 42% (see Table 14). This error alone suffices to undercut Dr. Murphy's opinions. Moreover, Dr. Murphy fails to quantify the size of the real price increases for the acquired brand events that Varsity continued to operate. I performed that analysis and determined that Varsity increased real prices of acquired brand events by 18.7% (see Table 21 and Table 22). To summarize the available evidence of the effects of Varsity's acquisitions of rival event producers: real prices increased; quantity (i.e., total participation) decreased; and Dr. Murphy identifies no evidence of Varsity investments to improve the quality of its events (to the contrary, evidence on the record shows that Varsity took concerted steps to reduce its investments and to reduce the quality of its events after acquiring its largest rivals).[412] Thus, according to Dr. Murphy's own theory, there are no pro-competitive justifications for the substantial real price increases observed in the data, and therefore the effects of Varsity's acquisitions of rival event producers from 2015-2018 were demonstrably anticompetitive.

[412] Deposition of Brian Elza, Nov. 16, 2021, 285:14-287:10 ("Q. And then No. 2 says, 'Reduce escalating production capabilities.' What does that mean? A. I mentioned this earlier, but we were – we had started spending too much money and overproducing these events, creating more of a rock star feeling – more lights, more bells, more fireworks – that it was a – it was an opportunity to reduce that. We were overdoing it. Q. And the purchase of JAM Brands means that you were taking out a competitor that might have caused this escalation of production capabilities; its that right? A. We were all – we were all doing it. We were just trying to one-up the guy before us. Q. You were one-upping your competitors, but if you take out your largest competitor, then you don't have as much incentive to one-up your competitors; is that fair? A. We learned we could be successful without all the bells and whistles, is really what we figured out. Q. And that's especially true because you purchased your largest competitors; isn't that fair. A. We – we would take a look at all of our acquisitions to see if there were some opportunities where we could make some changes that would, you know, help with the profitability of the events. Q. Let me just understand this. So one way to compete with JAM Brands events is to have more bells and whistles at the events to try to attract athletes and gyms, right? A. Yes, that's correct. Q. And another way to compete with JAM Brands events is to just purchase JAM Brands, right? A. In a sense, yes. Q. Right. So you can purchase JAM Brands events, and then you don't have to escalate the bells and whistles that you would potentially have to do if you had a big competitor in the marketplace escalating up against you; is that fair? A. Yes, that's fair." (omitting attorney objections)).

V.B.1. There was substantial and widespread harm caused by Varsity's acquisitions of rival event producers

369. Dr. Murphy states, "Dr. Heeb first concedes that the relevant geographic markets are regional 'as a technical matter' but then arbitrarily selects USASF regions from among 'multiple alternative definitions of regions' without providing any economic basis for doing so. Dr. Heeb then effectively imposes a national geographic market on his analysis of competitive effects once again ignoring results from his own analyses indicating this is inappropriate."[413]

370. Again, Dr. Murphy mischaracterizes my opinions and does not cite any of my written statements to support what he claims I said. To recap, I opined in my first report that the relevant geographic markets are regional, specifically the five regions that USASF uses to organize its business operations.[414] These are the "regions which the Defendants may have used in organizing their business across the United States."[415] Separately, on the issues of competitive effects, common impact, and class certification, I opined that Varsity's anticompetitive conduct is common across these five regions. This is for two main reasons. First, Varsity's pricing and business decisions are national in scope.[416] Second, I performed a quantitative overcharge analysis that confirmed that the effects of Varsity's conduct were common across the five regions.[417] Therefore, given common impact,[418] my opinions in my first report (and my opinions in this report) are that a common overcharge can be applied for all customers in the United States.[419]

371. Dr. Murphy writes "Dr. Heeb's conclusion of a national market is driven by a simple error

[413] Murphy Report, ¶ 298 (internal citations omitted).
[414] Heeb Report, ¶¶ 139-140 ("That there is a cost of travel implies that there is a limit to how far teams may travel to avoid a price increase in even entry fees imposed by a monopolist. Cheer teams may routinely travel hundreds of miles to attend a competition. They may travel to various parts of the United States to participate in important events, such as the World of the Summit competitions, but would not routinely do so to attend regular season events. Therefore, events that were further away than this distance would not compete on price with each other, unless there were other events located between them that competed with both and effectively conveyed the competitive effect beyond the travel radius of an individual team. Thus, as a technical matter, the relevant geographic market for antitrust purposes is smaller than national, and larger than local communities. Hence it is regional.")
[415] Heeb Report, ¶ 144.
[416] Heeb Report, ¶ 138 ("[the anticompetitive] conduct is national in scope.").
[417] Heeb Report, Tables 21 and 22.
[418] Heeb Report, ¶ 275 ("Although Varsity price changes were implemented at a local level, the pricing strategy itself was national in practice in terms of rationale and commonality of impact. Variations in price or price changes are not individualized but can be determine [sic] using common evidence.").
[419] Heeb Report, Tables 21 and 22.

in how he ran the regression he disclosed he ran."[420]

372. As described above, I offered no opinions or conclusions in my first report that the cheer competitions market is national. The relevant geographic markets are regional, as I stated repeatedly in my first report and state repeatedly in this rebuttal report.[421] The overcharge regression results that Dr. Murphy alludes to are described in complete detail in the following sections. The overcharge regressions that I report below contain updated empirical estimates relative to my first report. These updated empirical estimates are consistent with my initial opinions from my first report that the regional price overcharges are each statistically significant and greater than zero, that the regional overcharges are not statistically different from each other, and that these two empirical facts imply that it is reliable and appropriate to apply a common national overcharge to all Class Members.

V.B.1.a) Price effects (Varsity events)

373. Dr. Murphy states that, "[he] estimate[d] the effects of each relevant acquisition on Varsity prices (registration fees) by comparing the change in registration fees for Varsity competitions that were in the same local geographic markets as (and thus may have been in direct competition with) one or more acquired competitions to the corresponding changes in fees for Varsity competitions that were not so situated. If the effect of the acquisition was to reduce competition for Varsity and enable Varsity to increase registration fees, one would expect to see this effect in these local areas were acquisitions occurred."[422]

374. Dr. Murphy does not address the opinions that I offered in my first report. I agree with Dr. Murphy that Varsity's legacy events did not generally have significant increases in real price. Nor would I expect them to, based upon the predictions of economic theory and the facts of the case. I established in my first report that Varsity had acquired, exploited, and taken steps

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[420] Murphy Report, ¶ 300 (internal citations omitted).

[421] Heeb Report, ¶¶ 139-140 ("That there is a cost of travel implies that there is a limit to how far teams may travel to avoid a price increase in even entry fees imposed by a monopolist. Cheer teams may routinely travel hundreds of miles to attend a competition. They may travel to various parts of the United States to participate in important events, such as the World of the Summit competitions, but would not routinely do so to attend regular season events. Therefore, events that were further away than this distance would not compete on price with each other, unless there were other events located between them that competed with both and effectively conveyed the competitive effect beyond the travel radius of an individual team. Thus, as a technical matter, the relevant geographic market for antitrust purposes is smaller than national, and larger than local communities. Hence it is regional.")

[422] Murphy Report, ¶ 302 (internal citations omitted).

to retain its market power prior to the start of the Class Period.[423] With this market power, Varsity had implemented supracompetitive prices for its legacy events at the monopolist price level. Economic theory dictates that once real prices are set at the monopolist price level, any further increase in real price will only *decrease* profits, not increase them. Thus, even after acquiring rival event producers from 2014-2018, Varsity had no financial or economic incentive to increase real prices for its legacy events. The real prices were already at the monopolist price levels. Dr. Murphy's analysis exhibits a type of "cellophane fallacy," in which antitrust analysis fails to find a monopoly price increase because the monopolist is already pricing at the monopoly level. This point is further demonstrated by the fact that when Varsity acquired competitively priced events, it tended to either increase the real price of those events (i.e., to a level comparable to existing Varsity event prices), or to discontinue the competitively priced events and create new, higher priced events instead.

375. Therefore, Dr. Murphy's regressions provide little economic insight into the relevant issues of harm to competition in the cheer competitions markets. They are equally consistent with the explanation that I opined on in my first report: that Varsity had exploited its market power by setting supracompetitive prices for its legacy events at the monopolist price level.[424]

376. Not only are Dr. Murphy's regressions uninformative, but they are implemented using an explanatory variable that "proxies for changes in overall interest in cheer over time" and are determined from survey data collected by the National Federation of State High School Associations (NFHS).[425] The survey administered by the NFHS is called the High School Participation Survey, and archived results of this survey are available on the NFHS website.[426] Varsity Spirit is the first corporate sponsor listed on the NFHS list of sponsors on its website.[427] Moreover, Varsity Spirit has been a sponsor of NFHS since September 2002 and paid the organization $2.925 million (more than $350,000 per year) between 2003-

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[423] Heeb Report, ¶ 54 ("Whereas Varsity's market power was already, at the beginning of the Class Period (December 10, 2016 to present), uncompetitively high, this [anticompetitive acquisitions of competitors] conduct also sustained, preserved and extended that monopoly power.").

[424] Heeb Report, ¶ 54 ("Whereas Varsity's market power was already, at the beginning of the Class Period (December 10, 2016 to present), uncompetitively high, this [anticompetitive acquisitions of competitors] conduct also sustained, preserved and extended that monopoly power.").

[425] Murphy Report, ¶ 308.

[426] NFHS, "High School Participation Survey Archive," Sept. 16, 2022, accessed Nov. 4, 2022, available at: https://www.nfhs.org/sports-resource-content/high-school-participation-survey-archive/

[427] NFHS, "Our Partners and Nationals Sponsors," accessed Nov. 4, 2022, available at: https://www.nfhs.org/home-page-content/our-partners/

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2010.[428] While Varsity Spirit may have an incentive to work with a national high school association to "promote" the sport of competitive cheer,[429] it also has an incentive to influence the survey methodology for the NFHS High School Participation Survey in order to obtain survey results that demonstrate increased popularity in the sport of competitive cheer over time.[430] This latter incentive is particularly salient in the years leading up to 2014 (when Varsity was acquired by Charlesbank) and in the years leading up to 2018 (when Varsity was acquired by Bain).

377. Varsity Spirit's corporate sponsorship of an organization that collected the survey data relied upon by Dr. Murphy for his "demand control" explanatory variable calls into question the objectivity and reliability of the survey.[431] Dr. Murphy nowhere cites to the methodology

[428] Varsity Brands, 10-K Annual Report for the fiscal year ended December 31, 2002, March 31, 2003, p. F-16 ("In September 2002, the Company entered into a strategic alliance with the National Federation of State High School Associations (the 'Federation'). In exchange for the Federation endorsing the Company's cheerleading and dance team championships, the Company is obligated to pay the Federation annual license and educational fees over the term of the agreement. In addition to these fees, the Company will pay the Federation contingent fees based on membership and participant increases over an established base level. The agreement will expire on December 31, 2010. Future minimum license and educational fees under the Federation agreement for periods after 2002 are as follows: YEARS ENDING DECEMBER 31, (IN THOUSANDS) 2003 $ 350 2004 350 2005 350 2006 375 2007 375 Later years 1,125 ------- Total minimum payments required $ 2,925."). See also JEFF00047202 (Newby Exhibit 6), March 2011, at -215 ("Today we have long-term relationships with the important governing bodies … National Federation of State High School Associations (NFHS): Strategic alliance on promoting cheerleading at the high school level; Endorsement of Varsity's national high school championship"); see also Webb_AS_00000443, at -464 ("Directly from the 10-K Varsity document 2003 before going private with a Lenard Green buyout. Page 38. Varsity Brands relationship with National Federation of High Schools.").

[429] Ibid.

[430] Varsity senior executives have proposed fake surveys to obtain good press in furtherance of its anticompetitive scheme. See VAR00228394, at 394-395 (email from Jamie Parrish to Brian Elza, Tina Sexton, Jeff Fowlkes, and Tres LeTard dated Aug. 14, 2019, "No other sport, not even one, has rebate plans like Varsity/All Star cheer. Pros: We can keep them coming back for the Family Plan crack. Cons: Sooner or later, crack ho's turn on their pimp wanting more crack, better crack, and for less output. How we fix this? Blame it on Posh, or fake a survey, let me explain- … OR OPTION TWO We send out a customer survey: We develop a 'survey' for the gym owners to take online. It would go something like this. … A survey of this type … would just use the power of suggestion to have them 'worry' that Varsity is indeed thinking of going public with the family plan to gain positive press. I think we would find that the negativity might stop, and we may even develop some 'brand loyalty' in the process."). VAR00182095 (Elza Exhibit 26), at -095 (email from Brian Elza dated Aug. 14, 2019 responding to the prior email, "Good thoughts.").

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used in the survey to allow for an independent audit that the survey was unbiased and reliable based on its design and implementation.[432]

378. In fact, a simple statistical test suggests that the survey data may not have been collected using reliable and unbiased survey methodology.[433] To test this statistically, I collect all "Girls Participation" counts by states for the sport "Competitive Spirit Squad" from the 2002-2003 season through the 2018-2019 season. I limit my analysis to only states for which data for "Girls Participation" in the sport "Competitive Spirit Squad" was collected (states without survey data are reported as '0' in the NFHS High School Participation Survey). All observations exceed ten. I consider the last digit of the participation counts. An unbiased survey sample would have its last digit equally distributed across all possible values for that final digit, meaning the same number of observations with last digit '0'; same number of observations with last digit '1'; and so forth.

379. As shown in Table 20 below, the "Girls Participation" data that Dr. Murphy relies upon does not satisfy this necessary property.

gain positive press. I think we would find that the negativity might stop, and we may even develop some 'brand loyalty' in the process."). VAR00182095 (Elza Exhibit 26), at -095 (email from Brian Elza dated Aug. 14, 2019, responding to the prior email, "Good thoughts.").

432 Murphy Deposition, November 4, 2022, 222:25-223:11.

433 This test is a variation of an observation known as "Benford's Law," which among other things is used by the IRS to detect tax fraud. Benford's Law describes the distribution of particular digits, e.g., the leading digit or the last digit, in numbers from naturally occurring collections of numbers, such as counts from participation surveys. For example, provided that survey counts for all observations exceeded 10, then a sample of survey counts would be equally likely to end in the final digit '1' as it would be to end in the final digit '2'. There is no a priori justification for a greater frequency of observations having survey counts ending in the final digit '1' than those ending in the final digit '2'. See Wikipedia, "Benford's law," accessed Dec. 8, 2022, available at https://en.wikipedia.org/wiki/Benford%27s_law; Frank Benford, "The Law of Anomalous Numbers," Proceedings of the American Philosophical Society, Vol. 79, No. 4 (1938), 551-572. See also Theodore P. Hill, "A Statistical Derivation of the Significant-Digit Law," Statistical Science, Vol. 10, No. 4 (1995), 354-363, at -355, ("This dependence among significant digits decreases rapidly as the distance between the digits increases, and it follows easily from the general law (4) that the distribution of the nth significant digit approaches the uniform distribution on $\{0,1,\ldots,9\}$ exponentially fast as $n\to\infty$.")

Table 20. Chi-Squared Test of the Observed Frequencies of the Last Digit of the Participant Counts from the NFHS High School Participation Survey

Last Digit of Participants Count	Observed	Expected	Observed Minus Expected	Pearson
0	83	50.6	32.4	4.555
1	43	50.6	-7.6	-1.068
2	35	50.6	-15.6	-2.193
3	40	50.6	-10.6	-1.490
4	52	50.6	1.4	0.197
5	53	50.6	2.4	0.337
6	55	50.6	4.4	0.619
7	43	50.6	-7.6	-1.068
8	43	50.6	-7.6	-1.068
9	59	50.6	8.4	1.181
Chi-Squared Tests	H0: observed frequencies = expected frequencies			
	Pearson chi2(9) = 33.1304; Probability value = 0.0001			
	likelihood-ratio chi2(9) = 30.5993; Probability value = 0.0003			

Sources: NFHS High School Participation Survey Data.

380. Based on the total number of observations (506), I would expect 50.6 of the observations to have a last digit equal to '0'. The "Girls Participation" data that Dr. Murphy relies upon instead has 83 observations with the last digit equal to '0'. As shown in Table 20 above, for each of the ten possible values for the last digit, the "Observed" number of observations is reported next to the "Expected" number of observations. The value "Observed Minus Expected" is the difference between the "Observed" and "Expected" number of observations. The Pearson statistic is defined as the "Observed Minus Expected" value divided by the square root of the "Expected" value.

381. I implement a statistical test called the "chi-squared test" to test whether the observed frequencies are equal to the expected frequencies (the null hypothesis of my statistical test). The Pearson chi-squared coefficient is calculated by summing the square of the Pearson statistics for each of the possible last digits and comparing the sum (33.1304) to the chi-squared distribution with nine degrees of freedom. The p-value for the value 33.1304 on the chi-squared distribution with nine degrees of freedom equals 0.000, meaning that the statistical test rejects the null hypothesis at the 99.9% confidence level. The likelihood-ratio

test is a similar statistical test evaluated on the chi-squared distribution and the p-value for that test is likewise 0.000 (meaning that the null hypothesis is rejected at the 99.9% confidence level). Therefore, the observed frequencies are not randomly distributed, as is expected from a reliable and unbiased population count survey.

382. Therefore, both due to Varsity's financing role with the organization collecting the survey data and the statistical evidence proving that the survey was not conducted correctly, Dr. Murphy's regressions that include the "demand control" explanatory variable are unsupported as they rely exclusively on survey evidence that is unreliable.

V.B.1.b) Price effects (acquired events)

383. Dr. Murphy ignores the question of whether real prices increased for brand events acquired by Varsity (and by how much) and instead focuses his attention exclusively on the changes in total participation at such events. Dr. Murphy claims that "Varsity's acquisition of other event producers generated substantial benefits for consumers," without citing any evidence or economic analysis to support this opinion.[434]

384. In forming his opinions on price effects of acquired events, Dr. Murphy's takes general, "rule of thumb" predictions of economic theory, and applies them as undisputed fact to the market for cheer competition services at issue in this case. While the predictions of economic theory generally hold for textbook applications, including for goods such as manufactured goods, Dr. Murphy offers no evidence that the general principles apply to the market for cheer competition services. He offers no support from the academic literature that the general principles are applicable in this specific market. His narrow interpretation of economic theory offers a very stark divide between harm to competition and innocuous procompetitive behavior, all premised on whether the total participation in the cheer competitions increases.

385. Examples of his use of general language for the economic principles include "[i]ncreases in price after an acquisition *do not necessarily suggest* the acquisition was anticompetitive" (italics added);[435] "restriction in output that *typically* accompanies anticompetitive behavior" (italics added);[436] and "[p]rice increases that … occur in response to increases in demand

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[434] Murphy Report, ¶ 314.
[435] Murphy Report, ¶ 315.
[436] Murphy Report, ¶ 315.

generally are not anticompetitive" (italics added).[437] Yet, his conclusions are stark: "[i]f output increases, then there is no [harm to social welfare], even if prices also increase."[438]

386. Relatedly, Dr. Murphy claims "Dr. Heeb mistakenly assumes that a price increase that accompanied an acquisition necessarily means the acquisition was anticompetitive, but that is not correct."[439] This statement mischaracterizes the opinions that I offered in my first report. In that first report, I analyzed both the price and the quantity effects, and ultimately determined that anticompetitive effects arise from the significant increases in prices for acquired brand events and that there is no evidence that any increases in total participation for the acquired brand events (to the extent that they are even present) generate any cognizable benefits for consumers.[440] Dr. Murphy, by contrast and according to his own words, ignores the real price effects ("It would therefore not be surprising if prices for acquired events were higher than they were before the acquisition");[441] performs no analysis of the real price effects, and evaluates competitive effects based solely on whether total participation increases.[442]

387. Dr. Murphy's relies exclusively on the theoretical implication that increased quantity leads to increased consumer welfare. Yet this supposition does not hold universally and particularly for services like cheer competitions. Dr. Murphy cites no academic reference to support his opinion that increased participation at cheer competitions outweighs the negative harm to consumers from real price increases. Yet not only does Dr. Murphy presume that the benefits from participation increases outweigh the harm from real price increases, but he opines that the mere presence of participation increases implies that all observed real price increases are innocuous and can be explained away as procompetitive behavior with zero deleterious effects on social welfare. According to Dr. Murphy's theory, as little as a 1% increase in total participation is sufficient evidence to conclude that a simultaneous 50% increase in real price cannot possibly harm social welfare. This black-and-white view of the

[437] Murphy Report, ¶ 315.
[438] Murphy Report, ¶ 315.
[439] Murphy Report, ¶ 316 (internal citations omitted).
[440] Heeb Report, Tables 19 and 20.
[441] Murphy Report, ¶ 314.
[442] The only instance in Dr. Murphy's report where he calculates the real price changes is in his Exhibit 45. Dr. Murphy's Exhibit 45 reports real price changes for acquired brand events, but only for "Continued" events and not for "Unmatched" events. I previously detailed the flaws in this slanted reporting of the empirical facts related to real price changes, and I do not consider this to be an analysis of the real price effects.

world is a tortured interpretation of standard economic orthodoxy, and his interpretation is unsupported by evidence in this case and unsupported by the academic literature.

388. As an empirical matter, Dr. Murphy's conclusions about the competitive effects of Varsity's acquisitions of rival event producers are unsupported by evidence for three reasons. First, Dr. Murphy makes numerous calculation errors. Second, Dr. Murphy cites to misleading and incomplete analysis in his Exhibit 45. Third, Dr. Murphy relies exclusively on a narrow review of the available data and evidence (namely, only on total participation at acquired brand events).

389. First, Dr. Murphy's analysis of participation changes before and after acquisition is inaccurate, as it significantly misreports the number of participants in the acquired brand events before acquisition and after acquisition. Dr. Murphy concludes that "total attendance increased across these brands post-acquisition, even when accounting for closed events."[443] Dr. Murphy's conclusion that "total attendance increased" is incorrect as a matter of fact, as previously shown in Table 14 above.

390. Second, even if Dr. Murphy's calculations were accurate, the ways in which he reports the results in Exhibit 45 are misleading. Dr. Murphy reports the increased participation for acquired brand events that Varsity continued to operate following acquisition. The percent changes in participation that he reports in his Exhibit 45 are specific to these matched events (called "Continued Events" by Dr. Murphy).[444] However, this ignores the quantity effects from the net loss of acquired brand events because of Varsity's acquisition. To calculate net loss, I calculate the number of acquired brand events that Varsity discontinued in the first season after acquisition and subtract the number of new events that Varsity operated that used the acquired brand in the first season after acquisition. This net loss of acquired brand events is compared to the total number of competitions operated by the acquired companies before acquisition. Specifically, as reported Table 36, Varsity eliminated (on net) nine of the 25 Aloha events, one of the three ATC events, 16 of the 25 CSG events, five of the 73 EPIC events, 43 of the 109 JamBrands events, five of the 11 Mardi Gras events, and two of the 12 SCB events.

391. Third, Dr. Murphy nowhere analyzes or quantifies the real price changes before and after

[443] Murphy Report, ¶ 295.
[444] Murphy Report, Exhibit 45.

acquisition.[445] My analysis, both here and in my first report, considers both the real price changes and the quantity changes.[446] My first report summarized the nominal price changes using basic statistics to summarize the general properties across the distribution of all acquired brand events. I extend this analysis in the following subsection by reporting the real price and total participation changes for all acquired brand events across the entire distribution (see Table 37 through Table 50).

392. In addition to summary statistics, I further estimate the real price changes using a multiple linear regression methodology. The data sample that I consider for the regression is the set of brand events acquired by Varsity, restricted to brand events that Varsity acquired and continued to operate.[447] I obtain price information for these matched brand events both pre-acquisition and post-acquisition. The pre-acquisition price information is obtained from the acquired companies' registration records.[448] The post-acquisition price information is obtained from Varsity's registration records.[449]

393. The registration data reports total registration fees per team per event, total discount per team per event, and total athletes for each team that are registered for each event. Event revenues are defined as registration fees less discounts. Event price is defined as total revenue per event (i.e., summed over all participating teams) divided by the total number of athletes registered for that event (i.e., summed over all participating teams). I deflate the nominal prices by the average CPI values over the 12-month period comprising the competitive cheer season and select the 2018-2019 season as the base year (i.e., the CPI adjustment factor equals 1 for observations in the 2018-2019 season and the nominal prices equal the real prices for the 2018-2019 season). Applying the inflation adjustment to nominal prices generates real prices, which are the dependent variable in my analyses.

394. The explanatory variables for the regression include: a dummy variable to indicate the event

[445] The only instance in Dr. Murphy's report where he calculates the real price changes is in his Exhibit 45. Dr. Murphy's Exhibit 45 reports real price changes for acquired brand events, but only for "Continued" events and not for "Unmatched" events. I previously detailed the flaws in this slanted reporting of the empirical facts related to real price changes, and I do not consider this to be an analysis of the real price effects.
[446] Heeb Report, Tables 19 and 20.
[447] The regression results with all brand events, including the unmatched acquired brand events that were discontinued by Varsity and the new brand events that were started by Varsity, report larger and more significant price effects. See the Appendix.
[448] See Pre-Acquisition Data.
[449] See Varsity Registration Data.

brand, where all brands in the data sample were acquired by Varsity from 2015-2018 ; a dummy variable to control for the event fixed effects, i.e., an event-specific dummy variable;[450] a dummy variable to indicate if it is a regular-season or a postseason competition, which is subsequently interacted with the event brand dummy variables to generate brand-specific postseason dummy variables; a dummy variable to indicate whether the event is a World Bids Event, which is subsequently interacted with the brand dummy variables to generate brand-specific World Bids Event dummy variables; and a dummy variable to indicate if the event price was set by Varsity (post-acquisition) or by the independent rival (pre-acquisition). This latter dummy variable equaled 1 if the competition price was set by Varsity and equaled 0 if it was not. This "overcharge" dummy variable was subsequently interacted with the brand dummy variables to generate brand-specific "overcharge" dummy variables.

395. My primary specification implemented a multiple linear regression, where each observation was weighted by the number of athletes at that competition (to proxy for competition size). Table 21 below reports the regression output. Regressions 1 and 2 report the regression coefficients for the model with brand-specific overcharges (Regression 1 with non-robust standard errors and Regression 2 with robust standard errors); and Regressions 3 and 4 report the regression coefficients for the model with a single overcharge across all acquired brands (Regression 3 with non-robust standard errors and Regression 4 with robust standard errors). Standard errors are reported in parentheses below the coefficient values. Asterisk next to the coefficient values indicate statistical significance at the 1% (***), 5% (**), and 10% (*) levels.[451]

Table 21. Regression Output for Overcharge Model for Acquired Brand Events

Dependent Variable: Log Real Price				
	(1)	(2)	(3)	(4)
VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
World Bids Events Flag for ALO	0.292	0.292	0.290	0.290
	(0.179)	(0.216)	(0.179)	(0.216)

[450] Once the event dummy variables are included, the brand dummy variables are omitted. The interaction variables that include brand dummy variables, including brand overcharge variables, remain.

[451] A coefficient value with statistical significance at the 1% level means that there is a 1% probability (or less) that the data was generated by a model in which the coefficient value equals 0. At such a significance level, there is strong support (greater than 99% confidence) that the coefficient value is ***different*** from 0.

World Bids Events Flag for ATC	0.421*	0.421***		
	(0.255)	(0.076)		
World Bids Events Flag for CSG	0.212	0.212***	0.295	0.295***
	(0.370)	(0.038)	(0.262)	(0.015)
World Bids Events Flag for EPIC	0.926***	0.926***	0.877***	0.877***
	(0.122)	(0.047)	(0.117)	(0.056)
Post-Season Events Flag for JF	-0.126	-0.126***	-0.126	-0.126***
	(0.197)	(0.047)	(0.197)	(0.047)
World Bids Events Flag for JF	0.007	0.007	0.007	0.007
	(0.106)	(0.036)	(0.105)	(0.036)
World Bids Events Flag for MGS	0.368**	0.368***	0.366***	0.366***
	(0.145)	(0.095)	(0.130)	(0.101)
World Bids Events Flag for SCB	0.203	0.203	0.314***	0.314
	(0.127)	(0.177)	(0.113)	(0.219)
Overcharge Flag for ALO	0.155	0.155		
	(0.114)	(0.110)		
Overcharge Flag for ATC	0.317	0.317***		
	(0.284)	(0.070)		
Overcharge Flag for CSG	0.289	0.289***		
	(0.262)	(0.038)		
Overcharge Flag for EPIC	0.105	0.105***		
	(0.080)	(0.038)		
Overcharge Flag for JF	0.207***	0.207***		
	(0.033)	(0.014)		
Overcharge Flag for MGS	0.203	0.203**		
	(0.159)	(0.088)		
Overcharge Flag for SCB	0.404***	0.404***		
	(0.106)	(0.107)		
Overcharge Flag			0.207***	0.207***
			(0.028)	(0.015)
Constant	4.049***	4.049***	4.049***	4.049***
	(0.025)	(0.043)	(0.025)	(0.043)
Observations	632	632	632	632
R-squared	0.717	0.717	0.714	0.714
Weighted by Athlete Count	Yes	Yes	Yes	Yes
Event Dummies	Yes	Yes	Yes	Yes
Robust Standard Errors	No	Yes	No	Yes

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.

396. The coefficients on the brand overcharge dummy variables in Table 21 (Regression 2) are the estimates of Varsity's competition price overcharge in this model (sometimes called a dummy variable model). These results are further summarized in Table 22 below. The

overcharge estimates range from 10.0%-33.2% across the seven acquired brands for which data was available. Five of the seven overcharge estimates are statistically significant at the 99% confidence level (the p-values reported in Table 22 for these four acquired brands are each smaller than 1%), indicating significant statistical support for a positive price increase. A sixth overcharge estimate is significant at the 95% confidence level. Collectively, the seven overcharge values for all seven acquired brands are statistically significant (using an F-test) at the 99.9% confidence level (see Table 22).

Table 22. Price Overcharge for Varsity's Acquired Brand Events

Brand	Overcharge	Robust Standard Error	t-statistic	P-value	95% Confidence Interval, Lower Bound	95% Confidence Interval, Upper Bound
ALO	14.4%	0.110	1.41	0.160	-6.4%	31.1%
ATC	27.2%	0.070	4.56	0.000	16.5%	36.5%
CSG	25.1%	0.038	7.71	0.000	19.4%	30.4%
EPIC	10.0%	0.038	2.77	0.006	3.0%	16.5%
JF	18.7%	0.014	14.91	0.000	16.4%	20.9%
MGS	18.4%	0.088	2.31	0.021	3.0%	31.3%
SCB	33.2%	0.107	3.78	0.000	17.6%	45.9%
F-Test	H0: Overcharge_ALO = Overcharge_ATC = Overcharge_CSG = Overcharge_EPIC = Overcharge_JF = Overcharge_MGS = Overcharge_SCB = 0					
	F(7, 479) = 47.41					
	Prob > F = 0.000					
ALL BRANDS	18.7%	0.015	13.60	0.000	16.2%	21.1%

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.

397. The coefficient on the overcharge dummy variable in Table 21 (Regression 4) are the estimates of Varsity's overall price overcharge across all acquired events. These results are further summarized in Table 22 above. The overall price overcharge estimate equals 18.7%, which is statistically significant at the 99.9% confidence level. Further, the 95% confidence bands for the overall overcharge range from 16.2%-21.1% (see Table 22 above), implying that even at the lower edge of this range, the overcharge still exceeded 16%.

398. The value of the overcharge can be derived from the estimated coefficient for the regional indicator variable by applying the formula overcharge percentage = (exp(coefficient) – 1) /

exp(coefficient).[452]

399. Dr. Murphy writes, "Plaintiffs' experts fail to conduct the type of fact-based inquiry needed to assess the effects of the Varsity acquisitions on competition in the area surrounding the competitions they acquired, and for this and other reasons discussed above do not show that the acquisitions were anticompetitive. In any event, any potential harm associated with these unexplained registration fee increases would be limited to those events."[453]

400. First, the potential harm affected all but a *de minimus* fraction of the Class Members (see Table 6 and Table 7). The harm specific to the anticompetitive effects from the acquisitions could, conceptually, be limited to participants that attended an acquired brand event with a demonstrated real price increase. But, as shown in Table 37 through Table 43, nearly all acquired brand events had demonstrated real price increases. Further, Varsity customers that attended an acquired brand event accounted for 93% of the total entrants and 92% of the total registration fees across **ALL** Varsity All-Star competitions (see Table 5). Thus, "limiting" harm to participants that paid to attend an acquired brand event with a demonstrated real price increase is a significant and overwhelming share of all Class Members, in direct contradiction to Dr. Murphy's attempt to minimize this set of customers.

V.B.1.c) My analysis of price effect on acquired events

401. I wrote in my first report that "for five of the recent acquisitions made by Varsity, I have data on the registration fees charged by a competitor."[454] Upon reading Dr. Murphy's report, I became aware of registration records for the companies All Things Cheer (ATC) and Spirit Celebration (SCB) for the seasons leading up to Varsity's acquisitions of these companies.[455] With this new information, I update my analysis to include this pre-acquisition information for ATC and SCB. The results of this updated analysis are described throughout this report.

402. Dr. Murphy writes "Dr. Heeb's analysis of price increases (and event closures) following Varsity acquisitions is flawed and uninformative."[456]

403. To the contrary, my analysis in my first report identified significant price increases that

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[452] The percentage change in price relative to the competitive benchmark (but-for prices) equals exp(coefficient) – 1. The percentage change in price relative to the actual (elevated) prices equals (exp(coefficient) – 1) / exp(coefficient).
[453] Murphy Report, ¶ 324 (internal citations omitted).
[454] Heeb Report, ¶ 281.
[455] See VAR00513660 (ATC) and both VAR00195096 and VAR00195098 (SCB).
[456] Murphy Report, ¶ 325 (internal citations omitted).

Varsity imposed on acquired brand events in the first year after acquisition in which it obtained pricing control.[457] My analysis in my first report is corroborated by formal empirical regressions as introduced and described previously in this report (see Table 21, Table 22, Table 57, and Table 58).

404. Dr. Murphy writes "Dr. Heeb's assertions and analysis with respect to specific price increases on acquired competitions are limited to acquired All Star competitions. He does not analyze prices of specific scholastic competitions, or camps, or apparel."[458]

405. Dr. Murphy is correct. While Varsity made numerous acquisitions during the Class Period and in the years prior, including in the markets for competitions, camps, and apparel, the only information that Varsity produced about the performance of the companies it acquired prior to acquisition were registration records for seven companies that it acquired (with year of acquisition): Aloha (2016), All Things Cheer (2017), CSG (2017), EPIC (2018), JamBrands (2015), Mardi Gras (2017), and Spirit Celebration (2017). All these companies produced All-Star competitions prior to being acquired by Varsity.

406. Dr. Murphy writes "Dr. Heeb makes a number of significant errors in conducting his analysis of acquired competition price changes. For one, Dr. Heeb inflates the difference between pre-acquisition and post-acquisition prices of acquired EPIC events by deducting EPIC rewards program discounts from pre-acquisition prices but fails to deduct VFP rebates from post-acquisition prices. The EPIC rewards program was similar in structure to the Varsity Family Plan in that it provided discounts to customers that depended on the number of EPIC competitions they attended. Dr. Heeb asserts elsewhere that loyalty rewards benefitted only the direct purchasers '(gyms and schools)' and were not passed through to indirect purchasers. His assertions, even if they were supported (and they are not), do not warrant his inconsistent treatment of rewards programs, an inconsistency that inflates differences between pre-acquisition registration fees and post-acquisition fees, by deducting rewards from the former but not the latter."[459]

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[457] Heeb Report, Tables 19 and 20; ¶¶ 284-286.
[458] Murphy Report, ¶ 327 (internal citations omitted).
[459] Murphy Report, ¶ 329 (internal citations omitted).

V.B.1.c(i) CONDITIONAL REBATES LIKE VFP AND NETWORK SHOULD NOT BE SUBTRACTED FROM EVENT PRICES

407. Dr. Murphy conflates discounts and rebates and lumps them both into a category he calls "rewards." But simple discounts and conditional rebates that Varsity offers through its VFP and "Network" rebates programs, have very different economic effects. Simple discounts lower the price of a purchase, like an early registration fee or just a temporary sale price, are procompetitive, and their economic effect is to simply subtract the discount from the price. Conditional rebates, especially those that condition a rebate on the share of the buyer's total purchases, or total volume purchased, or on the purchase of other products, are potentially very different. Often, the economic effect of such a rebate is complex, and not well approximated by subtracting the average rebate amount from the price of an individual component of the conditional bundle of goods purchased.[460] Upon economic analysis, these rebates may be found to be benign, as simple discounts are, or highly coercive and anticompetitive.

408. Dr. Murphy correctly notes that I have deducted simple discounts found in Varsity's registration data from registration fees when calculating my overcharge regression dependent variable; however, it is not appropriate to deduct rebates received under Varsity's conditional rebate loyalty programs from those prices.[461] I also deduct any list price discounts such as early registration discounts that reduce the prices actually paid by the customer when registering for the event.

409. I strongly disagree with Dr. Murphy's assertion that it would be appropriate to deduct allocated, back-end conditional rebates, such as the Varsity Family Plan and the Varsity Network, from the prices paid for cheer event registrations for the purposes of calculating the anticompetitive effects on Varsity's event prices. Certainly, when calculating damages, the aggregate amount paid for monopolistically inflated event registration prices should be adjusted to account for the aggregate value of those lump-sum rebate payments kicked back by Varsity, for any entity or person who received such payments. However, calculating damages is not part of my charge. It is my charge to calculate the amount by which Varsity's

[460] For a discussion of the economic effect of conditional rebates see the discussion beginning at ¶ 273, and particularly ¶¶ 278-284.
[461] Murphy Report, ¶ 391 (internal citations omitted).

event prices were impacted by the anticompetitive conduct. Moreover, that exercise is best conducted separately from the determination of whether the alleged anticompetitive scheme resulted in higher event pricing.

410. Varsity offers discounts and rebates. EPIC, and other rival event producers, offer discounts. When calculating competition prices for my price comparisons and overcharge analyses, I calculate the price variable as the ratio of total net fees (defined as total registration revenue less discounts) and the total number of athletes.[462] I subsequently adjust the nominal prices for inflation to use real prices in my analysis. The reasons that I calculate net fees by deducting discounts and not rebates are three-fold and were provided in my first report.[463]

411. First, simple discounts are subtracted from the gross price at the point of sale and are not conditional on other purchases, including later purchases, that a customer makes. I have made no assertions that discounts have anticompetitive effects. Discounts can be applied for many reasons, including "early sign-up" discounts given to customers that register for events early. Simple discounts are procompetitive and the economic effect is equivalent to subtracting the discount from the price.

412. In contrast, the economic effect of conditional rebates, like VFP and Network, are highly complicated for both the buyer and the seller, and for rivals of the seller competing with the seller. The effective value of the rebate to each of these three different parties varies according to circumstances related to the conditions that are placed on the rebate, as well as other factors unrelated to the particular sale. They may depend upon factors in the past that are known at the time of sale, and factors in the future that are both uncertain, and affected by the transaction itself. Simply subtracting the average value of such a rebate from the purchase price, as if it were a simple discount, is almost certainly going to distort any analysis of the resulting price. The more accurate and appropriate treatment is to treat the price as the price, and account for the value of the rebate in the analysis of the transaction. With respect to the competitive effect and the incentives for buyers, sellers and rivals, see my discussion above beginning at ¶ 259, and particularly ¶¶ 264-270. For the purposes of calculating

[462] Dr. Murphy refuses to call this variable a price, but the variable "Net Fees per Athlete" is nothing other than the ratio of total net fees and the total number of athletes. See Murphy Report, Exhibits 56 and 58; Murphy Deposition, November 3, 2022, 152:9-153:12.

[463] Heeb Report, ¶ 224 (describing anticompetitive effects of conditional rebates) and ¶ 225 (describing calculation of the price variable).

damages, the accurate and appropriate treatment is simple: Calculate the overcharge on the actual transacted price and subtract the total value of any rebates received by the entity that ultimately made the payment.

413. Dr. Murphy inaccurately concludes that EPIC offers rebates with the same characteristics as Varsity's VFP rebates. To support his conclusion, he relies on a single sentence from a 128-page Bain presentation that reads: "EPIC incentivizes repeat participation by offering increasing discounts for each competition attended."[464] The EPIC discounts are never described as rebates and never compared or equated with the rebates Varsity offers in its VFP and "Network" programs. Further, the way in which the EPIC discounts are awarded, as described in this one slide, suggests that prior participation in EPIC events generates a discount for current EPIC events at the point of sale.[465] Thus, receipt of the discount is not conditional on future attendance in that season, not conditional on apparel spend (as is the case with the Varsity rebates), and the collection of the discount is not withheld until the end of the season to ensure that all participation terms of the program have been satisfied. The EPIC discount program offers discounts, while the Varsity VFP and "Network" rebate programs are significantly different and offers conditional rebates as I described in my first report.[466]

414. The Varsity VFP and "Network" rebates have separate and distinct anticompetitive effects, which are as large or larger than the size of the rebates themselves.[467] To calculate the price effects alone, independent and separate from the anticompetitive effects of conditional rebates, I define price as registration fees less discounts and do not deduct rebates. I employed

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[464] CB00485513, at -562. Notably the same Bain presentation slide describes EPIC as offering lower prices than Varsity, a fact consistent with my own analysis and inconsistent with Dr. Murphy's theories ("[EPIC] Competitions are offered at a price point more appealing to value customers").

[465] CB00485513, at -562. The example rewards level displayed on the slide indicates that EPIC customers receive a 5% discount when they attend the 1st EPIC event, an 8% discount when they attend the 2nd EPIC event, a 10% discount when they attend the 3rd EPIC event, a 15% discount when they attend the 4th EPIC event, and a 20% discount when they attend the 5th EPIC event. This type of discount program, also called a rewards program, is common for many companies, including retail stores. Varsity's VFP rebates program operates much differently. Under Varsity's VFP rebates program, if customers attend at least 6 Varsity events and spend between $70,000-$99,999 in the 2016-2017 season (for example), then they stand to earn a 10% rebate on all those events (payable at the end of the season with 75% in the form of a cash rebate and 25% in the form of Varsity Fashion Dollars). See VAR00020214, at -214. Economists evaluate consumer decisions at the margin, and the marginal decisions by consumers, and therefore the potential for anticompetitive effects, are substantially different between EPIC's discount program and Varsity's VFP rebates program.

[466] Heeb Report, ¶¶ 219-224.

[467] See the extensive discussion of conditional rebates beginning at ¶ 273, and particularly ¶¶ 278-284.

this methodology in my first report, and I employ this methodology in this report.

415. Dr. Murphy, by contrast, ignores the anticompetitive effects arising from rebates. Dr. Murphy further ignores the evidence that such rebates were not passed on by gyms to indirect purchasers (athletes and athletes' parents).[468]

416. Dr. Murphy writes "Dr. Heeb also appears to have arbitrarily applied discounts to pre-acquisition prices of the acquired Aloha competitions, despite evidence that Aloha did not provide such discounts. While he does not disclose having done this in his report, examination of his backup materials reveals that Dr. Heeb takes the average of the discounts he observes for EPIC and CSG and applies those average discounts to the pre-acquisition prices of Aloha competitions. These Aloha 'discounts' lower the pre-acquisition prices of Aloha competitions by around 30 percent, which of course inflates any difference in pre- and post-acquisition pricing accordingly. Dr. Heeb provides no basis for extrapolating discounts from EPIC and CSG to apply to Aloha prices. Furthermore, his arbitrary discounting ignores evidence from Varsity's Aloha acquisition due-diligence materials that indicate that Aloha did not provide rebates or discounts. Likewise, Dr. Heeb also applies an approximately 30 percent discount to pre-acquisition prices of Mardi Gras competitions, despite the lack of any evidence that Mardi Gras provided discounts at this—or any—level."[469]

417. Registration records for both EPIC and CSG events, prior to their acquisition by Varsity, contain detailed P&L information, including gross sales and discounts. Based on those detailed records for EPIC and CSG, I calculated the average discounts that customers received from attending EPIC and CSG events. The records produced by Varsity for Aloha and Mardi Gras events were incomplete. The limited information that was produced included the gross price for Aloha and Mardi Gras events. Based on the Varsity registration records and the pre-acquisition registration records for all acquired brands other than Aloha and Mardi Gras (which all reported discounts), I determined in my first report that Aloha and Mardi Gras both offer discounts to registrants for its events and that such discount information was simply not reported in the data produced in this case. Dr. Murphy offers no

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[468] Heeb Report, ¶ 195 ("These rebates amounted to kickbacks to those [gyms], the direct purchasers, who generally did not share those payments [with] the participants."). See also Deposition of Alexa Bray, January 11, 2022, 64:25-65:6 ("Q: Do you know what Stars & Stripes did with any rebate it received under the Family Plan? For example, did it refund it to the parents? A. It was not refunded to the parents. I don't know specifically, you know, what exactly it was spent on. No.").

[469] Murphy Report, ¶ 330 (internal citations omitted).

evidence that Mardi Gras events did not offer discounts to customers. Dr. Murphy does offer evidence that Aloha events did not include discounts, which was notable enough to merit recognition in Varsity pre-acquisition due diligence.[470] With this new information on Aloha and discounts, I have updated my analysis to remove any discounts on the Aloha brand event prices. This change does not affect my qualitative conclusions as the pre-acquisition real prices for Aloha brand events remain significantly lower than the real prices set by Varsity after acquiring Aloha (see Table 37).

418. Dr. Murphy writes "[w]ith respect to Aloha, Dr. Heeb also makes mistakes in how he links competitions between the pre-acquisition season (2016/2017) and the post-acquisition season. In particular, after its acquisition of Aloha, Varsity appears to have combined two GSSA-branded events: the 1-day Nor Cal Classic and the 2-day Championship North. Varsity evidently replaced or renamed the 2-day Championship North with a 2-day version of the Nor Cal Classic, beginning in the 2017-2018 season. In his pricing comparison, Dr. Heeb compares the registration fees of the 1-day pre-acquisition Nor Cal Classic and the 2-day post-acquisition version and, not surprisingly, finds a large increase. ... Dr. Heeb also chooses to link a 1-day event in Los Angeles with a 2-day event in Fresno, California, and compares their fees without any apparent basis for doing so."[471]

419. Varsity did not produce event-by-event P&Ls, which would contain both sales and costs information at the event-level and would allow for the type of economic analysis that Dr. Murphy claims is necessary to identify price changes. Event-level P&L information was produced for the companies CSG and EPIC pre-acquisition. Yet, based on Dr. Murphy's testimony, Varsity's position is that consistent event-level P&L information was not available in the company's records.[472] The analysis that I performed is accurate and reliable, given the information produced by Varsity. If the company produces new information, specifically event-level P&L information, I reserve the right to update my analysis and my opinions.

420. Varsity acquired the GSSA-branded "Nor Cal Classic" and "GSSA Championships North"

[470] Murphy Report, ¶ 330 (citing VAR00128717, at -718-719).
[471] Murphy Report, ¶ 331 (internal citations omitted).
[472] Murphy Deposition, November 4, 2022, 228:19-25 ("we talked to Mr. Landon about it, he kind of informed us of some of the various changes to the way things are done that happened over time, which kind of pushed us away from using a specific cost measure.").

events from Aloha Productions and combined them into one event with the name "Nor Cal Classic." The combined event took place in December in Sacramento, which was the same location as both prior events and the same weekend that the "GSSA Championships North" was formerly held. On net, one Aloha-branded event in the Sacramento CSA was discontinued during the November/December period with Varsity's acquisition. I update my price comparison of these events by taking the maximum value of the prices that Aloha charged for its "Nor Cal Classic" and its "GSSA Championships North" events and comparing this maximum to the price that Varsity charged for the "Nor Cal Classic" event post-acquisition. I calculate a 4% real price increase, after adjusting for inflation.

421. Varsity acquired the Aloha brand event called "LA 2017" and subsequently moved the event up-state to Fresno. I update my analysis by recognizing that the change in location means that the two events are not a match for the purposes of calculating real price changes pre- and post-acquisition. These events are not included in my matched real price comparison analysis.

422. These corrections to the real price comparison analysis for Aloha brand events do not change the qualitative opinions that the post-acquisition real prices increased for 10 of the 15 Aloha brand events that Varsity acquired and continued to operate (see Table 37), and that the average real price increase across all 15 events was 12.2% (see Table 1). These real price effects do not account for the Aloha brand events that Varsity acquired and shut down, with evidence showing that the ten Aloha brand events that were discontinued had significantly lower real prices than the one new Aloha brand event that Varsity created (see Table 44).

423. Dr. Murphy writes "Dr. Heeb's characterization of the observed increases in registration fees as the result of anticompetitive conduct ignores the various non-anticompetitive explanations for the observed increases that I described above. Dr. Heeb offers no analysis as to whether the pre-acquisition event producer could have increased profits and revenues of these events on a standalone basis by increasing prices. Having not offered this analysis, Dr. Heeb cannot say that the acquisition was the reason that prices increased. Record evidence indicates that for several of Dr. Heeb's chosen benchmark competitors, such an analysis is necessary because at least some of the acquired events were viewed to be underpriced on a standalone

basis."[473]

424. Dr. Murphy provides no evidence in support of his opinion of "various non-anticompetitive explanations for the observed [price] increases."[474] Specifically, Dr. Murphy offers no evidence to support his hypothesis that "the pre-acquisition event producer could have increased profits and revenues of these events on a standalone basis by increasing prices," instead citing only to Varsity internal documents that document expected price increases post-acquisition.[475] Dr. Murphy's unsupported hypothesis is inconsistent with his assessment that the companies were rational and profit maximizing when it came to negotiating the terms of acquisition with Varsity.

425. As evidence of Dr. Murphy's inconsistency with his unsupported hypothesis, consider that the real price increases that Varsity imposed on acquired events were the smallest for Aloha branded events (see Table 1). Yet Aloha does not employ discounts or rebates (appearing to be of the only acquired event brand producer that does not offer discounts). By not using discounts or rebates, which Dr. Murphy claims is standard competitive behavior for companies in this industry, Aloha would be considered by Dr. Murphy to be unsophisticated relative to Varsity and is not a rational, profit-maximizing firm. Yet, despite being "irrational or not profit-maximizing," Aloha's real prices were closer (in relative terms) to Varsity's real prices post-acquisition than those for other rival event producer.[476] This inconsistency, by which the least sophisticated rival sets real prices most consistent with Varsity, undermines Dr. Murphy's unsupported hypothesis that the competitor prices are too low to be competitive prices.

426. Dr. Murphy writes, "[t]o investigate [the price increase issues], I reviewed the attendance at those events that continued post-acquisition and for which there were post-acquisition price increases. The available evidence from Varsity's registration data indicates that more participants attended the competition after the price increase than before."[477]

427. Dr. Murphy is incorrect as a matter of fact. As I previously showed in Table 14 above, fewer participants attended the acquired brand competitions after Varsity acquisition than before. I

[473] Murphy Report, ¶ 332 (internal citations omitted).
[474] Murphy Report, ¶ 332.
[475] Murphy Report, ¶ 332 (citing the one document VAR00249288).
[476] Murphy Report, ¶ 332, note 541.
[477] Murphy Report, ¶ 333 (internal citations omitted).

analyzed the pre- and post-acquisition real prices for all acquired brand events that Varsity continued to operate post-acquisition, as well as the pre- and post-acquisition participation for those same events. This evidence is reported in Table 37 through Table 43.

428. The analysis of participation changes for these events does not account for the participation changes from acquired brand events that Varsity discontinued. I analyzed evidence of the real price and participation changes for the discontinued events in Table 14, Table 36, and Table 44 through Table 50. Within Dr. Murphy's artificially narrow set of events, namely only the acquired brand events that Varsity continued to operate, I analyzed the participation changes in Table 37 through Table 43. For a significant share of events, both the post-acquisition real price was higher than the pre-acquisition real price and the post-acquisition participation was smaller than the pre-acquisition participation. For these events, **<u>fewer</u>** participants competed in these events after the real price increase than before, contrary to Dr. Murphy's conclusion.

429. Beyond Dr. Murphy's inaccurate conclusion stemming from his numerous calculation errors, the conceptual argument is flawed. Dr. Murphy's opinions rely on the assumption that any real price increase can be explained away as "pro-competitive" with a participation increase. While economic theory predicts that increased quantity translates into increased consumer welfare for **<u>some markets</u>**, including canonical examples such as manufactured goods like widgets, there is no economic support, either theoretical or empirical, to support Dr. Murphy's conclusion that the theory holds in **<u>all markets</u>**. In particular, he offers no evidence that the theory holds in the cheer competitions markets, which is a type of service market in which quantity (the number of participants attending the competition) and the nature of production (it is unclear if athletes are producing the service that is being consumed at the cheer competitions, or if athletes are consuming the service that is produced by some combination of Varsity and the other athletes at the competition) do not have natural analogs to the market for widgets. There is no economic support for his assumption that higher athlete participation in a cheer competition necessarily implies higher consumer welfare, and this flaw undermines all of Dr. Murphy's opinions on price effects and competitive harm.

430. Dr. Murphy writes "[n]otably, while Varsity did increase registration fees for some events, as I have discussed above, other events saw little or no registration fee increases. Dr. Heeb ignores this heterogeneity in reporting the average fee increases across the competitions for

each of the acquisitions he includes in Table 19."[478]

431. I do not ignore the heterogeneity. I reported statistics in my first report that summarized the increases in prices generally for event brands acquired by Varsity. I considered the heterogeneity in forming my opinions in my first report. In this report, I explicitly report the real price changes for all acquired brand events (the entire distribution) in Table 37 through Table 43.

432. The complete distribution of real price changes corroborates and confirms my earlier opinions from my first report that Varsity's pricing of acquired brand effects had anticompetitive effects on consumers that paid to attend those events.

433. As previously described, the analysis in my first report considered "five of the recent acquisitions made by Varsity."[479] Upon reading Dr. Murphy's report, I became aware of registration records for the companies All Things Cheer (ATC) and Spirit Celebration (SCB) for the seasons leading up to Varsity's acquisitions of these companies.[480] With this new information, I have updated my analysis to include this pre-acquisition information for ATC and SCB.

434. The empirical evidence on the complete distribution of real price changes can be summarized by three key empirical facts. First, Varsity increased real prices for nearly all acquired brand events. Second, the real price increases were significant, and substantial for acquired World Bids Events. Third, Exhibit 46 attempts to convey muted price effects, but the graphic suffers from a distorted price scale.

435. First, Varsity increased real prices for nearly all acquired brand events that it continued to operate: it increased real prices for 10 of the 15 Aloha brand events that it acquired and continued to operate (see Table 37); both of the ATC brand events that it acquired and continued to operate (see Table 38); all seven of the CSG brand events that it acquired and continued to operate (see Table 39); 34 of the 51 EPIC brand events that it acquired and continued to operate (see Table 40); 39 of the 41 JamBrands events that it acquired and continued to operate (see Table 41); five of the six MGS brand events that it acquired and continued to operate (see Table 42); and all nine of the SCB events that it acquired and

[478] Murphy Report, ¶ 334 (internal citations omitted).
[479] Heeb Report, ¶ 281.
[480] See VAR00513660 (ATC) and both VAR00195096 and VAR00195098 (SCB).

continued to operate (see Table 43). These numbers do not account for the acquired brand events that Varsity discontinued. Table 44 through Table 50 provide evidence that the real prices for the discontinued events were significantly smaller than the real prices for the new events that Varsity created with the acquired brands.

436. Second, Varsity increased real prices substantially for the acquired World Bids Events: 107% real price increase for the Aloha event "Mid Atlantic" (see Table 37); 48% real price increase for the ATC event "International Championship") (see Table 38); 65% real price increase for the CSG event "CSG Super Nationals) (see Table 39); 13% real price increase for the EPIC event "Reach the Beach" (see Table 40); 54% real price increase for the EPIC event "Battle at the Boardwalk" (see Table 41); 17% real price increase for the JamBrands event "Cheer Super Nationals" (see Table 41); 22% real price increase for the JamBrands event "National Championship" (see Table 41); 33% real price increase for the JamBrands event "Midwest National Championship" (see Table 41); 26% real price increase for the JamBrands event "Battle at the Capitol" (see Table 41); 35% real price increase for the JamBrands event "The Showdown Grand Nationals (see Table 41); 64% real price increase for the MGS brand event "MG Extravaganza National" (see Table 42); and 128% real price increase for the SCB brand event "Spirit Celebration Christmas Championship" (see Table 43).

437. Third, Dr. Murphy provides an example of his price analysis in his Exhibit 46, which shows the "registration fees for the six Mardi Gras competitions" that were acquired by Varsity and that Varsity continued to operate.[481] Dr. Murphy's Exhibit 46 displays the nominal prices charged in the 2016-2017 season (prior to acquisition; prices set by MGS); in the 2017-2018 season (acquisition season; prices set by MGS); and in both 2018-2019 and 2019-2020 seasons after acquisition (Varsity pricing control). Dr. Murphy's Exhibit 46 includes $0 price on the y-axis, despite the smallest price being $47; and includes the nominal prices for the six events on the same price scale, despite significant price variation across events. For example, the "Extravaganza" event was more than twice as expensive as the "Jester Jingle" and "Jester Jubilation" events post-acquisition ($120 and $133 for "Extravaganza" in the 2018-2019 and 2019-2020 seasons, respectively, as compared to $62 and $62 for "Jester Jingle" in those same seasons and $63 and $65 for "Jester Jubilation" in those same seasons).

[481] Murphy Report, ¶ 334.

A better representation would be to display the real price changes on consistent scales. Dr. Murphy's Exhibit 46 has an inappropriate price scale, under which, for example, the nominal price difference between the $48 for "Jester Jubilation" in the 2017-2018 season and the $63 for the "Jester Jubilation" in the 2018-2019 season appears minimal. In fact, this nominal price increase for "Jester Jubilation" equaled 30%.

438. To correct the flaws of Dr. Murphy's Exhibit 46, I have constructed figures with a proper y-axis to display the real price changes for acquired brand events that Varsity continued to operate, where the real price changes are determined by comparing the most recent season prior to Varsity pricing control (pre-acquisition) to the first season of Varsity pricing control (post-acquisition), after controlling for inflation with CPI data. To obtain an unbiased comparison of real price changes across events, I normalize the pre-acquisition real price for all events to 100. With this normalization, the real prices in the first season of Varsity pricing control (post-acquisition) for each event represent real price increase percentages (i.e., a normalized real price of 130 in the first season of Varsity pricing control corresponds to a 30% real price increase). Figure 2 through Figure 8 contain the illustrations of the real price changes for all acquired brand events that Varsity continued to operate for each of the seven brands that Varsity acquired between 2015 and 2018. From those figures, I conclude the following: for Aloha branded events (see Figure 3), nearly all real price increases are in the range from 4%-15%, with one event having real price increases larger than 100% (depicted off the top of the figure) and three events having negligible price changes, and two events having a real price decrease; for ATC branded events (see Figure 4), the events increased in real price by 7% and 48%; for CSG branded events (see Figure 5), all real price increases are in the range from 19%–73%; for EPIC branded events (see Figure 6), real price increases typically range from 0%–30%, with a handful of outliers on each side; for JamBrands events (see Figure 7), real price increases typically range from 10%–40%, with a few outliers on each side; for MGS events (see Figure 8), three events had negligible real price changes, two events had real price increases of 28–29%, and one event had a real price increase of 64%; and for SCB events (see Figure 9), three events had negligible real price increases, one event had a 20% real price increase, four events had real price increases ranging from 67%-77%, and one event had a real price increase of 128% (depicted off the top of the figure).

439. Specific to MGS brand events and his Exhibit 46, Dr. Murphy further opines that "the overall

average increase was driven largely by one event: the Mardi Gras Extravaganza National (a World Bids Event)."[482] While it's true that the weighted average of the real price changes for MGS brand events was impacted to a greater degree by the "Extravaganza National" event, this event had a significantly larger number of participants than the other MGS events. It was (and is) a World Bids Event. The anticompetitive real price effects on consumers are larger for a 65% real price increase on this large event (with 3,100 participants) than it would be for a comparable 65% real price increase on a smaller event (with 500 or 700 participants). Such consumer welfare calculations are standard fare for economists, and Dr. Murphy's apparent request to weight small events with equal weight as large events is inconsistent with standard economic theory and practice.

440. Dr. Murphy writes, "Plaintiffs' experts provided no evidence or analysis showing anticompetitive effects of any event closures during the Class Period."[483]

441. To the contrary, my initial report identified the acquired brand events that Varsity discontinued and the new events that Varsity established using the acquired brands. I found that there was a substantial net loss of acquired brand events.[484] My analysis in this report corroborates and confirms that opinion. As previously described above and shown in Table 14, there was a substantial net loss of participation in acquired brand events, driven by the substantial net loss of acquired brand events. Specifically, as shown in Table 14 above, summed across all seven acquired brands and all the acquired brand events for these brand companies, total participation decreased from the last year of pre-acquisition to the first year of Varsity pricing control by 141,566 athlete registrations, which was equal to a 42% decrease in total participation.

442. After the filing of his report, Dr. Murphy's testimony includes new claims that, based on his understanding, the Mardi Gras Extravaganza National (a World Bids Event) was originally a 1-day event pre-acquisition and changed to a 2-day event post-acquisition.[485] Dr. Murphy is wrong as a matter of fact. The pre-acquisition event information from Mardi Gras Spirit states that the "MG Extravaganza" event was a 2-day event in the 2014-2015 season (event

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[482] Murphy Report, ¶ 334 (internal citations omitted).
[483] Murphy Report, ¶ 335 (internal citations omitted).
[484] Heeb Report, Table 20.
[485] Murphy Deposition, November 4, 2022, 69:16-25 ("that's about the Mardi Gras Extravaganza event. And that event was actually changed from a one-day event to a two-day event. And so that, I think, is something I learned subsequent to the report.").

competition dates from 1/17-18/15); was a 2-day event in the 2015-2016 season (event competition dates from 1/16-17/16); and was a 2-day event in the 2016-2017 season (event competition dates from 1/21-22/17).[486] Varsity acquired Mardi Gras Spirit in December 2017, so these three seasons with event date information for the "MG Extravaganza" event were the three most recent seasons prior to Varsity's acquisition of MGS. In all three pre-acquisition seasons, the "MG Extravaganza" event was a 2-day event, in contradiction to Dr. Murphy's testimony.[487] Table 60 displays the complete raw data file from Mardi Gras Spirit, and this clearly shows that the "MG Extravaganza" event occurred on the dates that I detailed above.

V.B.1.d) Event closures and output effects

443. Dr. Murphy writes "Plaintiffs' experts have provided no analysis showing that any purported harmful effects of these closures outweigh the pro-competitive gains from consolidation."[488] Dr. Murphy states in the footnote that "Dr. Heeb and Dr. Netz assert that Varsity harmed competition by acquiring competitions, discontinuing them, and replacing them with higher priced events. This claim entirely ignores the potential effects of other quality improving differences in the characteristics of the purportedly replacement events from the original ones. Neither expert provides any support for their underlying assumption that any price differences were not a result of cost or quality differences between the closed event and the 'replacement'."[489]

444. To the contrary, I have analyzed and confirmed that the anticompetitive effects of the acquisition include both an increase in the real prices that Varsity charged for the events that it continued to operate, and an overall decrease in total participation at acquired brand events, including both the events that Varsity continued to operate and the events that it discontinued (see Table 21, Table 22, and Table 14).

445. Dr. Murphy does not dispute, and even corroborates my analysis showing that the real prices for the new events that Varsity created with the acquired brands were significantly larger

[486] VAR00123779.
[487] Murphy Deposition, November 4, 2022, 69:16-25 ("that's about the Mardi Gras Extravaganza event. And that event was actually changed from a one-day event to a two-day event. And so that, I think, is something I learned subsequent to the report.").
[488] Murphy Report, ¶ 338 (internal citations omitted).
[489] Murphy Report, ¶ 338, note 547 (internal citations omitted).

than the real prices for the acquired brand events that Varsity discontinued.[490]

446. Dr. Murphy's opinions about the quality of events post-acquisition are directly contradicted by Varsity fact witness testimony that the company reduced investments in its events and reduced the quality of events upon acquiring one of its largest competitors (JamBrands).491

447. Dr. Murphy writes "Dr. Heeb and Dr. Netz claim that Varsity harmed competition by closing events after they were acquired and thus decreased output. But the number of events is not a reliable measure of output, as it ignores changes in the attendance and the quality of other competitions affected by the closure. Neither Dr. Heeb nor Dr. Netz make any attempt to examine participation, nor do they attempt to test their claims quantitatively. Determining the net effects of the closures on competition requires detailed inquiries into the circumstances surrounding each of the event closures, inquiries that neither Dr. Heeb nor Dr. Netz performed."[492]

448. My analysis considers both changes in total participation and changes in the number of events (see Table 14 and Table 36). Dr. Murphy analyzed neither in their entirety, as his analysis only considered the acquired brand events that Varsity continued to operate. Thus, he ignores the total participation changes as he ignores the participation changes due to the acquired brand events that Varsity chose to cancel. My initial report identified the acquired brand events that Varsity chose to cancel and the new events that Varsity established using the acquired brands. I found that there was a substantial net loss of acquired brand events.[493] My

[490] Murphy Report, Exhibit 45.

[491] Deposition of Brian Elza, Nov. 16, 2021, 285:14-287:10 ("Q. And then No. 2 says, 'Reduce escalating production capabilities.' What does that mean? A. I mentioned this earlier, but we were – we had started spending too much money and overproducing these events, creating more of a rock star feeling – more lights, more bells, more fireworks – that it was a – it was an opportunity to reduce that. We were overdoing it. Q. And the purchase of JAM Brands means that you were taking out a competitor that might have caused this escalation of production capabilities; its that right? A. We were all – we were all doing it. We were just trying to one-up the guy before us. Q. You were one-upping your competitors, but if you take out your largest competitor, then you don't have as much incentive to one-up your competitors; is that fair? A. We learned we could be successful without all the bells and whistles, is really what we figured out. Q. And that's especially true because you purchased your largest competitors; isn't that fair. A. We – we would take a look at all of our acquisitions to see if there were some opportunities where we could make some changes that would, you know, help with the profitability of the events. Q. Let me just understand this. So one way to compete with JAM Brands events is to have more bells and whistles at the events to try to attract athletes and gyms, right? A. Yes, that's correct. Q. And another way to compete with JAM Brands events is to just purchase JAM Brands, right? A. In a sense, yes. Q. Right. So you can purchase JAM Brands events, and then you don't have to escalate the bells and whistles that you would potentially have to do if you had a big competitor in the marketplace escalating up against you; is that fair? A. Yes, that's fair." (omitting attorney objections)).

[492] Murphy Report, ¶ 339 (internal citations omitted).

[493] Heeb Report, Table 20.

analysis in this report corroborates and confirms that opinion. As previously described above and shown in Table 14, there was a substantial decrease in total participation for acquired brand events, driven by the substantial decrease of acquired brand events. Specifically, as shown in Table 14 above, summed across all seven acquired brands and all the acquired brand events for these brand companies, total participation decreased from the last year of pre-acquisition to the first year of Varsity pricing control by 141,506 athlete registrations, which was equal to a 42% decrease in participation. Thus, Dr. Murphy's opinions about total participation changes for acquired brand events are unfounded as they rely exclusively on inaccurate calculations in his Exhibit 45.

449. Dr. Murphy writes "Overall, the results presented in the exhibit [47] do not support Dr. Heeb and Dr. Netz's claim that output (as measured by participation in events) was reduced by the event closures, as output was also declining in areas without such event closures. Furthermore, Dr. Heeb and Dr. Netz neglect to consider that the event closures were more likely a response to the declining participation, rather than a cause of it."[494]

450. As described above and supported by the facts in Table 14 above, total participation in acquired brand events decreased significantly, and that this 42% decrease in total participation for acquired brand events was primarily driven by the event closures.

451. Elsewhere Dr. Murphy asserts that total (or market) participation increased using evidence that participation in Varsity events increased.[495] This logic is flawed. Varsity's participation increased due to its acquisitions, which increased its event count market share in All-Star events from 34.1% (at the beginning of the 2015-2016 season) to 56.2% (at the end of the 2017-2018 season). This 3-season period included Varsity's acquisitions of JamBrands, Aloha, Spirit Celebration, All Things Cheer, Champion Spirit, Mardi Gras Spirit, and EPIC.[496] In terms of revenue market share, Varsity's revenue market share in All-Star events increased from 75.2% to 87.6% with the acquisitions of Aloha, Spirit Celebration, All Things Cheer, Champion Spirit, Mardi Gras Spirit, and EPIC (see Table 4). The fact that total participation at Varsity's events increased by a *lesser degree* than its market share (obtained through acquisitions) provides no insight into whether the overall (market) participation

[494] Murphy Report, ¶ 342 (internal citations omitted).
[495] Murphy Report, ¶ 318; Murphy Deposition, November 3, 2022, 169:2-11 ("you're going to get increases in total attendance at the acquired events.").
[496] Heeb Report, Table 12.

increased. Following Varsity's acquisitions, the non-Varsity share of the market participation was significantly smaller. Dr. Murphy has no support for any of his opinions about total (or market) participation as he did not analyze any data for non-Varsity competitors in the market and therefore has no opinions and no calculations for total (or market) participation.

452. Dr. Murphy writes "Dr. Heeb also claims that Varsity discontinued some of the acquired events and replaced them with more expensive new events under the acquired brands. However, the flaws in his analysis of acquired competitions continued by Varsity, discussed above, also apply to this analysis of discontinued competitions. For instance, as Dr. Heeb acknowledges, his price comparisons do not control for differences in event characteristics. Similarly, his analysis of discontinued acquisitions does not consider potential differences in quality between events that were closed and events that remained open, or that newly introduced Varsity events may have been higher quality that [sic] discontinued events. Relatedly, Dr. Heeb assumes that closures were the result of anticompetitive conduct, without analyzing whether closures may have been economically efficient and benefitted consumers."[497]

453. By their very nature, the closing of an existing acquired brand event and the creating of a new event with that acquired brand means that the closed event is a different event than the new event. Thus, it is not possible to match the closed events with a new event, or vice versa. Absent controlling for event characteristics directly, I implement a multiple linear regression model that controls for the relevant factors between the unmatched events. I implement this regression methodology to measure the change in real prices between pre-acquisition acquired brand events and post-acquisition acquired brand events. My main regression (see Table 21 and Table 22) only considered a data sample with matched acquired brand events, i.e., the acquired brand events that Varsity continued to operate. A supplemental regression (see Table 57) considers an expanded data sample that includes both the matched and the unmatched acquired brand events, where the unmatched events include both the acquired brand events that Varsity discontinued and the new events that Varsity created with the acquired brand. The real price effects are similar in magnitude and slightly larger for the supplemental regression with both matched and unmatched events. This confirms my

[497] Murphy Report, ¶ 343 (internal citations omitted).

opinions in my first report that Varsity replaced the old events with new events that were more expensive (in real terms).

454. Additionally, as described above, I did not find any evidence to support Dr. Murphy's theory that the new events that Varsity created with the acquired brands had higher quality than the acquired brand events that Varsity chose to discontinue. To the contrary, I find evidence from a Varsity's executive testimony that Varsity's acquisitions allowed the company to reduce the quality of its events, both its legacy events and its acquired brand events.[498]

V.B.1.e) Counter programming with "attack events" against acquisition targets

455. In a footnote, Dr. Murphy states "Dr. Heeb references Plaintiffs' claim of Varsity's 'counter-programming rival cheer competitions,' but provides no evidence or analysis for this claim. Nor do either Drs. Netz or Heeb offer evidence that Varsity's decisions regarding where and when these 'targeting' events involved USASF."[499]

456. I do not claim to rely on evidence that directly links USASF with Varsity's "attack events" conduct. Evidence in this case proves that USASF President, Jim Chadwick, and USASF Vice President, Steve Peterson, were employed full-time by Varsity while serving in their leadership roles at USASF, and received significant financial compensation when Varsity was sold to Charlesbank in 2014 and later to Bain in 2018. Given the relationships between employees of USASF and Varsity and the inherent conflicts of interest from such relationships, it is not possible to separate USASF from any of Varsity's anticompetitive

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[498] Deposition of Brian Elza, Nov. 16, 2021, 285:14-287:10 ("Q. And then No. 2 says, 'Reduce escalating production capabilities.' What does that mean? A. I mentioned this earlier, but we were – we had started spending too much money and overproducing these events, creating more of a rock star feeling – more lights, more bells, more fireworks – that it was a – it was an opportunity to reduce that. We were overdoing it. Q. And the purchase of JAM Brands means that you were taking out a competitor that might have caused this escalation of production capabilities; its that right? A. We were all – we were all doing it. We were just trying to one-up the guy before us. Q. You were one-upping your competitors, but if you take out your largest competitor, then you don't have as much incentive to one-up your competitors; is that fair? A. We learned we could be successful without all the bells and whistles, is really what we figured out. Q. And that's especially true because you purchased your largest competitors; isn't that fair. A. We – we would take a look at all of our acquisitions to see if there were some opportunities where we could make some changes that would, you know, help with the profitability of the events. Q. Let me just understand this. So one way to compete with JAM Brands events is to have more bells and whistles at the events to try to attract athletes and gyms, right? A. Yes, that's correct. Q. And another way to compete with JAM Brands events is to just purchase JAM Brands, right? A. In a sense, yes. Q. Right. So you can purchase JAM Brands events, and then you don't have to escalate the bells and whistles that you would potentially have to do if you had a big competitor in the marketplace escalating up against you; is that fair? A. Yes, that's fair." (omitting attorney objections)).

[499] Murphy Report, ¶ 345, note 552 (internal citations omitted).

conduct, including the "attack events" conduct.[500]

457. As previously described, Varsity would preview rival event producers' upcoming season of events and counter-program what it called "attack events" in order put its rivals out of business and make them easier to acquire.[501] The strategy of "attack events" was systematically organized by Varsity across its entire sales teams.[502] The company implemented "Competitor Tracking Instructions" for its sales team to systematically track the schedules of its competitors in order to implement its "attack events" strategy.[503] With this coordinated and systematic "attack events" strategy in place, the sales team was wildly successful in "the amount of events [Varsity] CRUSHED this season and that they had to cancel."[504]

458. As one example, Varsity set up events in the 2017-2018 season to go head-to-head with Mardi Gras Spirit events in Louisiana in order to reduce the participation at the "MARDI GRAS world bid Event in New Orleans on Jan 14 weekend" below the threshold for that

[500] Murphy Deposition, November 3, 2022, 282:20-283:12; 288:24-289:21. Jim Chadwick had an employment contract with Varsity from 1996-2021, including from 2004-2021 when he was the President of USASF. See Deposition of Jim Chadwick, April 15, 2022, 41:1-19. Steve Peterson was an employee of Varsity sine Varsity acquired National Spirit Group in 2004 and while he was the Vice President of USASF. Mr. Peterson earned $276,000 from the "Varsity Employee Stock Option Plan" when Varsity was acquired by Charlesbank in 2014 and "several hundred thousand dollars" from "Phantom Unit Plan" options when Varsity was acquired by Bain in 2018. See Deposition of Steve Peterson, March 9, 2022, 282:10-284:13; 287:15-288:21; 297:4-8; 306:15-22; 314:10-315:14.

[501] Deposition of Jim Hill, March 21, 2022, 118:2-14 ("To – to your question of attack events to maybe affect somebody's decision, there's one in particular that I can recall where the previous owner, Tammy Van Vleet, GSSA, and – Golden State Spirit Association. And she made this comment directly to me – and this is years ago – but, you know, 'I didn't want to sell, but I had to. You know, you guys were coming and it was either sell and – and get something out of it, or you put me out of business,' was her – was her terminology and opinion of why she chose to sell to Varsity when she did.").

[502] VAR00318601 (Hill Exhibit 5), at -601 (email from Jim Hill to Brian Elza et al. (30+ recipients) on Aug. 28, 2013, "for the 'Attack Events' please reference the attached spreadsheet. I know there is a TON of info on it but I will explain on the sales call. Anything in Green is our event, Red is a JamBrands event, White is an IEP event. If you see a row highlighted in Orange that means this is a NEW event. Yellow means the event is no longer listed on the competitor brand website, so the assumption is the event no longer exists."); VAR00318604. JamBrands was Varsity's largest competitor at the time (Varsity acquired JamBrands in 2015) and the color "Red" seems to indicate increased urgency for the sales team to install "Attack Events" up against JamBrands events. See also VAR00318421 (Hill Exhibit 6), at -421 (email from Brian Elza to Jim Hill on Aug. 28, 2013, in response to the prior email, "In the past I feel like we have done a good job of identifying them, but not a great job of attacking them. We need to figure out what it will take to pull each customer away, then execute. I'd start with Fall events and then work your way up to Spring events. I don't think all the Advisors will figure this out on their own without your guidance.").

[503] VAR00320716 (Hill Exhibit 7).

[504] VAR00324040 (Hill Exhibit 8), at -040 (email from Joshua Johnson to Tres LeTard and Jim Hill, dated April 15, 2014, "Just thought you both would be interested in seeing the amount of events we CRUSHED this season and that they had to cancel." Mr. Johnson then listed 16 events that were cancelled in Texas and Colorado).

event to retain its status as a World Bids Event.[505] Varsity went on to acquire Mardi Gras Spirit in December 2017 of that 2017-2018 season and subsequently cancelled the event that it had scheduled head-to-head with the Mardi Gras World Bids Events and "move all of those teams to MARDI GRAS."[506]

459. As another example, one of the acquisitions was Aloha (owner of the GSSA brand events) whose owner, Tammy Van Fleet, explained to Jim Hill, "I didn't want to sell, but I had to. You know, you guys were coming and it was either sell and – and get something out of it, or you put me out of business."[507]

460. Dr. Murphy claims that this conduct of counter programming with "attack events" is not only not anticompetitive, but its opposite, the "hallmark of healthy [procompetitive] competition."[508] Aggressive price competition by itself may be procompetitive, particularly if it involves simple discounting of prices to steal customers from a rival. However, attacking a rival's business with the aim and effect of driving that rival to exit or sellout cheaply, in order to win a monopoly, echoes the allegations that led to the antitrust revolution at the beginning of the twentieth century. Implemented with modern, (potentially) anticompetitive pricing methods such as conditional rebates, and along with other conduct including coercion of suppliers, foreclosure of rival customer access channels, anticompetitive acquisitions, capture and collusion of regulatory entities, among others, the addition of "attack events" to the monopoly broth does not, in my economic opinion, appear to be remotely procompetitive. Moreover, Varsity's prices are higher, not lower, than its rivals, as would be necessary under Dr. Murphy's procompetitive conjecture. Instead, Varsity's conduct is more consistent with a concerted plan to achieve and maintain monopoly prices.

[505] VAR00081435 (Hill Exhibit 11), at -435 (email from Brian Elza to John Nichols, Landon Craft, Tres LeTard, and Jim Hill dated Dec. 7, 2017, "As you know we often put events on other events in order to hurt our competitors. This past season we decided to put a JAM event in Baton Rouge to go head to head with MARDI GRAS world bid Event in New Orleans on Jan 14 weekend. Strategy worked and now Mardi Gras is sitting around 60 ish teams and JAM at 70. If MARDI GRAS doesn't hit 125 teams they lose their Tier 1 status.").

[506] VAR00081435 (Hill Exhibit 11), at -435 (email from Brian Elza to John Nichols, Landon Craft, Tres LeTard, and Jim Hill dated Dec. 7, 2017, "The JAM event is budgeted to make $46K. If we cancel the cancellation fee is @$13K. Plan would be to cancel JAM and move all of those teams to MARDI GRAS.").

[507] Deposition of Jim Hill, March 21, 2022, 118:2-14 ("To – to your question of attack events to maybe affect somebody's decision, there's one in particular that I can recall where the previous owner, Tammy Van Vleet, GSSA, and – Golden State Spirit Association. And she made this comment directly to me – and this is years ago – but, you know, 'I didn't want to sell, but I had to. You know, you guys were coming and it was either sell and – and get something out of it, or you put me out of business,' was her – was her terminology and opinion of why she chose to sell to Varsity when she did.").

[508] Murphy Report, ¶ 345 (internal citations omitted).

V.C. Varsity Expanded and Maintained Its Monopoly Power by Foreclosing Rivals

461. Dr. Murphy disputes that Plaintiffs' experts have shown that the alleged conduct forecloses rivals. He calls out the conduct related to Varsity's Squad Credentialing Program, the conditional rebate plans, VFP and VNA, and the refusal to allow third-party apparel vendors market at Varsity events.[509] He then offers a lengthy discussion of "the Economics of Market Foreclosure"[510], beginning with vertical foreclosure in which he acknowledges that vertical foreclosure may lead to anticompetitive effects, although he claims this rarely occurs.[511]

462. His analysis implicitly assumes that the vertical foreclosure of resources is the only element of the monopolist's anticompetitive strategy. Vertical foreclosure allegations are a component of the Plaintiffs' monopoly broth theory, but Plaintiffs do not allege that this conduct, in isolation, is sufficient by itself to foreclose rivals. The concept of foreclosure includes the notion of partial foreclosure which effectively impedes the rival's ability to compete against the monopolist. They claim only that it creates an additional impediment to rival profitability and success, limiting their ability to successfully compete away Varsity's monopoly rents. Monopolization of World Bid Events, Squad Credentialing, control over credible judges, and coercion of venues to limit rivals' access are all components of the alleged scheme that reflect vertical foreclosure pressures.

463. The proper analysis of harm to competition and whether Varsity's conduct foreclosed rivals requires an analysis of the combined effects of all components of Varsity's conduct, in their totality. Dr. Murphy continues to ignore the Plaintiffs' theory of harm by attempting to analyze the competitive effects of each component of Varsity's multi-faceted scheme in isolation and ignoring the effects of all conduct in totality (see prior section on "Competitive Effects").

464. For the first cited conduct, the squad credentialing program, the total effects of this restriction can only be analyzed alongside Varsity's conduct in the cheer competitions markets (specific to school customers) and in the cheer camps markets. This restriction has anticompetitive effects as it exploits Varsity's market power in the cheer competitions markets to expand its market power in the cheer camps markets.

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[509] Murphy Report, ¶ 346 (internal citations omitted).
[510] Murphy Report, beginning at ¶ 347 (internal citations omitted).
[511] Murphy Report, at ¶¶ 347-348 (internal citations omitted).

465. For the second cited conduct, the restrictions in the VFP and "Network" conditional rebates programs, see my previous discussion of these programs.[512]

466. Finally, for the third cited conduct, the restrictions on rival apparel companies' ability to sell apparel at Varsity's events, the total effects of this restriction can only be analyzed alongside Varsity's conduct in the cheer competitions markets and the cheer apparel market. As previously described, Varsity used its "attack events" strategy and exploited its relationships with venue operators to foreclose competing event producers from hosting cheer competitions on their preferred dates and in their preferred locations.[513] As a result, rival cheer apparel companies had limited opportunities at non-Varsity events to market their products. Thus, Varsity's restrictions on rival apparel companies' ability to sell apparel at Varsity's events were anticompetitive as they leveraged Varsity's market power from the cheer competitions markets to diminish its direct competitors in the cheer apparel market.

V.C.1. World Bids Events are critical inputs

467. Dr. Murphy devotes a subsection of his report to discussing world bid events, the most important of these vertical restraints. He attempts to show in his analysis that "World Bid events are not critical inputs."[514] Dr. Murphy's arguments fail to support his claim, and his data demonstrate the opposite. For example, he claims that "attending more than two World Bid events was rare between 2016/2017 and 2018/2019."[515] In fact, his own Exhibit 50 shows that attendance at World Bid events increased throughout this period, and by the 2018-2019 season, gyms accounting for 53.7% of all participant registrations attended more than two World Bids Events.[516] I would not consider 53.7% "rare." Not only are these not rare; they

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[512] See the extensive discussion of conditional rebates beginning at ¶ 273, and particularly ¶¶ 278-284.

[513] VAR00318601 (Hill Exhibit 5), at -601 (email from Jim Hill to Brian Elza et al. (30+ recipients) on Aug. 28, 2013, "for the 'Attack Events' please reference the attached spreadsheet. I know there is a TON of info on it but I will explain on the sales call. Anything in Green is our event, Red is a JamBrands event, White is an IEP event. If you see a row highlighted in Orange that means this is a NEW event. Yellow means the event is no longer listed on the competitor brand website, so the assumption is the event no longer exists."); VAR00318604. JamBrands was Varsity's largest competitor at the time (Varsity acquired JamBrands in 2015) and the color "Red" seems to indicate increased urgency for the sales team to install "Attack Events" up against JamBrands events. See also VAR00318421 (Hill Exhibit 6), at -421 (email from Brian Elza to Jim Hill on Aug. 28, 2013, in response to the prior email, "In the past I feel like we have done a good job of identifying them, but not a great job of attacking them. We need to figure out what it will take to pull each customer away, then execute. I'd start with Fall events and then work your way up to Spring events. I don't think all the Advisors will figure this out on their own without your guidance.").

[514] Murphy Report, at ¶ 351.

[515] Murphy Report, at ¶ 353.

[516] Murphy Report, Exhibit 50.

are critical inputs. World Bid Events are high visibility, high prestige events. By the 2018-2019 season, Varsity had obtained a 78.6% bid-count market share in World Bid Events (see Table 2). If the gyms representing 53.7% of participant registrations have chosen Varsity World Bid Events, they are at least 40% of the way (2 of 5) to qualifying for participation in the VFP, with a strong incentive to attend 3 more events to qualify. Once in the VFP, these gyms have an even stronger marginal incentive to attend more Varsity events and avoid substitution to rivals' events.[517]

468. Dr. Murphy writes in a footnote, "[Dr. Heeb] does claim, however, that 'According to the USASF, only 15-20 percent of Level 6 and 7 teams do not receive a bid for the end-of-year World cheer championships. As Varsity has the vast majority of USASF bid events, this suggests that a large portion of all participants are increasingly dependent on Varsity events to receive bids to the World championship.' Whether or not "Level 6 to 7 teams are becoming 'increasingly dependent' on Varsity, these teams account for only a small portion of All Star teams that participate in Varsity competitions, as discussed."[518]

469. Level 6 to 7 teams may comprise only "a small portion of All Star teams" as Dr. Murphy claims, but they account for a significant portion of Varsity's registration revenues from All-Star gyms and a significant portion of Varsity's apparel revenues from All-Star gyms.[519] From Dr. Murphy's own analysis, All-Star gyms with a Level 5, Level 6, or Level 7 team accounted for 63% of the total entrants at Varsity events from All-Star gyms from the 2015-2016 season through the 2018-2019 season.[520] Further, All-Star gyms with a Level 5, Level 6, or Level 7 team accounted for 60% of Varsity's total apparel revenue from All-Star gyms from the 2015-2016 season through the 2018-2019 season.[521]

[517] See the extensive discussion of conditional rebates beginning at ¶ 273, and particularly ¶¶ 278-284.
[518] Murphy Report, ¶ 351, note 560 (internal citations omitted).
[519] Murphy Report, ¶ 351, note 560.
[520] Murphy Report, Exhibit 2 ("Total Registrations" for "L5-L7 only" gyms equaled 131; "Total Registrations" for "L1-L4 + L5-L7" gyms equaled 257,138; and "Total Registrations" for "L1-L4 + L5-L7 + Other" gyms equaled 1,019,252 for a total of 1,276,521 registrations. "Total Registrations" for all gyms equaled 2,029,150. The ratio of registrations for gyms with a L5-L7 team to total registrations equaled 1,276,521 ÷ 2,029,150 = 63%.).
[521] Murphy Report, Exhibit 17 (The total apparel sales for "Gyms with L5-L7 Teams" equaled $16,620,418 over the four seasons 2015-2016 season through the 2018-2019 season. The total apparel sales for "Total All Star Gyms" equaled $27,480,279. The ratio of apparel sales for gyms with a L5-L7 team to total apparel sales to All-Star gyms equaled $16,620,418 ÷ $27,480,279 = 60%.).

V.C.2. Competition was substantially foreclosed by the VFP and the VNAs

470. In a footnote, Dr. Murphy writes, "Dr. Heeb alleges that the VFP 'had the effect of creating anticompetitive incentives that rival firms could not match, as they lacked the entire bundle of competitions, camps, and apparel that Varsity offered,' but the VFP did not involve camps or anything to do with scholastic cheer."[522]

471. The VFP conditional rebates program involved customers in the cheer competitions markets. These customers were also customers in the cheer apparel market. The two markets were linked by Varsity through this program in several ways. First, discount levels depended on total spend, including spend on apparel. Second, rebates were paid out partially in with Fashion Dollars (gift certificates that could be used to purchase Varsity apparel and expired on August 1st following the end of the competition season).[523] This link between the apparel market and the event market allowed Varsity to extend the benefits of its anticompetitive conduct with VFP to lock customers into its apparel offerings.[524] The excessive market share Varsity built and maintained also enhanced its ability to monopolize apparel.

472. Not all customers in the cheer competitions markets, the cheer apparel market, or the cheer camps markets, had direct antitrust injury from the VFP conditional rebates program, but this is immaterial for my conclusion that this particular Varsity conduct (rebates program) had anticompetitive effects. This program also ties together the markets for cheer competitions and cheer apparel such that conduct related directly to either also impacts the other. I later discuss Dr. Murphy's failure to address, with either quantitative or qualitative evidence, the economic question of antitrust injury.

473. Importantly, for the current question of harm to competition, Dr. Murphy continues to ignore the Plaintiffs' theory of harm by attempting to analyze the competitive effects of each element of Varsity's multi-faceted scheme in isolation and ignoring the effects of all elements of the conduct in totality (see prior section on "Competitive Effects").

474. Dr. Murphy writes, "Plaintiffs' experts have failed to provide any analysis to show that

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[522] Murphy Report, ¶ 355, note 567 (internal citations omitted).

[523] VAR00020214, at -214 ("75% of the [rebates earned] can be redeemed in the form of a cash rebate and 25% will be in the form of Varsity Fashion Dollars"; "After your last Varsity Family Plan event for the 2016-2017 season, fax or email your completed W9 before the rebate deadline to claim your rebate. Please allow 6-8 weeks for processing."; "Varsity Fashion Dollars must be used by August 1, 2017. Please allow 6-8 weeks for processing.").

[524] See the extensive discussion of conditional rebates beginning at ¶ 273, and particularly ¶¶ 278-284.

Varsity would be able to recoup its losses from below-cost pricing once it had successfully driven competing event producers out of the market."[525]

475. Dr. Murphy misunderstands Plaintiffs' claim and theories of harm.[526] Plaintiffs do not claim that Varsity is pricing below cost to drive competitors out of the markets in a conventional predatory pricing scheme (which would require recoupment), although the VFP rebates may be predatory as that term is used in analysis of conditional rebates.[527] With the VFP rebates deducted, Varsity's prices are not "below cost," but still elevated relative to a competitive benchmark.[528] Further, Varsity does not need to "recoup any losses" or increase prices after "successfully driv[ing] competing event producers out of the market."[529] Rather, Varsity is already extracting monopolist rents from its VFP customers through the restrictions that VFP customers must comply with in order to be eligible for the rebates. The monopolist rents that Varsity extracts from as a result of the coercive effect of the conditional rebates is of greater value than the size of the rebates, so there is no incentive for Varsity to remove the conditional rebates scheme once it "successfully driv[es] competing event producers out of the market."[530] If anything, an elimination of competing event producers would lead, and has led, Varsity to expand its anticompetitive VFP conditional rebates program, not curtail it.

476. Dr. Murphy writes, "[c]ontrary to Plaintiffs' experts' assertions, gyms were not 'lock[ed] in' into buying apparel."[531] I disagree. Under the terms of the VFP conditional rebates program, All-Star gyms would earn rebates based on both the number of events that they attended and the total program spend (on competitions plus apparel plus camps) in that season. According to Varsity, for the 2016-2017 season, "75% of the [rebates earned] can be redeemed in the

[525] Murphy Report, ¶ 373 (internal citations omitted).

[526] Complaint, Section VII.B.1 ("Elements of Varsity's Exclusionary Scheme" include "1. Varsity and USASF Created a System of Bids for Admissions to National Tournaments as a Means to Funnel Athletes to Its Local and Regional Tournaments"; "2. Varsity and USASF Created Competition Rules That Deny Potential Competitors a Foothold in the Industry"; "3. Varsity Uses Exclusive Agreements with All-Star Gyms and Schools to Foreclose Access to the Relevant Markets"; "4. Varsity Forecloses Access to the Cheer Apparel Market"; "5. Varsity Leverages Its Monopoly Power in the Cheer Competition Market to Foreclose Competition in the Cheer Camp Market"; and "6. Varsity Counter-Programmed Rivals' Competitions.").

[527] See the extensive discussion of conditional rebates beginning at ¶ 273, and particularly ¶¶ 278-284.

[528] Murphy Report, ¶ 373, Exhibit 58. Dr. Murphy's own Exhibit 58 demonstrates that the prices charged by Varsity, even after deducting rebates, were overpriced by 16.3% relative to the competitive benchmark that I use in my price overcharge analysis. See also Table 28 (replicates Dr. Murphy's Exhibit 58 when deducting rebates from prices).

[529] Murphy Report, ¶ 373.

[530] Murphy Report, ¶ 373.

[531] Murphy Report, ¶ 374 (internal citations omitted).

form of a cash rebate and 25% will be in the form of Varsity Fashion Dollars" and "Varsity Fashion Dollars must be used by August 1, 2017."[532] Despite what Varsity claimed in its promotional materials, the transaction-level data it produced in this litigation for the amounts of rebates paid shows that 35% of the rebates were paid out in Varsity Fashion Dollars for the 2016-2017 season through the 2019-2020 season.[533] Thus, 35% of the rebates were issued in gift certificates that would expire only a few months after the end of the competition season. Gift certificates that expire are, by their very definition, use-it-or-lose-it propositions. All-Star gyms were locked-in to purchasing Varsity apparel up to the amount of the gift certificate; otherwise, they would be left with a piece of paper without any value.

477. The more exclusive conditional rebates program that Varsity implemented was the "Network."[534] Under the terms of the "Network" rebate program as of 2011, All-Star gyms must commit to a "3 year agreement"; "MUST purchase NEW Varsity/CDT/Ozone uniforms during agreement"; "Spend 30k+ on competitions"; and "Attend at least 4 VFP events hosted by 3 different brands with an average of 75% of the gym's programs."[535] An explicit requirement that participants in the "Network" rebate program "MUST purchase NEW Varsity/CDT/Ozone uniforms during agreement" and that the agreement is a 3-year commitment are canonical examples of "Network" customers being locked in to buying Varsity apparel.[536]

478. Dr. Murphy states, "Plaintiffs' experts do not explain how discounts through Fashion Dollar awards would be different from coupons or other discounts that are used in many industries and are generally considered to benefit consumers."[537] First, the Fashion Dollar awards are not discounts, they are cash equivalents useful only for Varsity apparel, which are paid out as part of allegedly anticompetitive VFP.[538]

479. Fashion Dollars expire. According to Varsity, for the 2016-2017 season, "75% of the [rebates

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[532] VAR00020214, at -214.
[533] See VAR00352214. Varsity promotion materials describe the increase in the fraction of rebates paid out in Varsity Fashion Dollars for the 2018-2019 season. See VAR00007743, at -765.
[534] Heeb Report, ¶ 220 (citing VAR00081049, at -049); VAR00100695, at -709.
[535] VAR00100695, at -709. The "Network" agreement was made more restrictive by 2018 as membership required "8 Varsity All Star Event Minimum"; "$150,000 Minimum Spend"; "Purchase Varsity All Star Fashion Uniforms"; "Purchase Varsity All Star Fashion Shoes"; and "Purchase a 3rd Varsity All Star Fashion Category: Bags, Warm Ups, Practice Wear, Accessories, etc." See VAR00007743, at -768.
[536] VAR00100695, at -709.
[537] Murphy Report, ¶ 374 (internal citations omitted).
[538] See the extensive discussion of conditional rebates beginning at ¶ 273, and particularly ¶¶ 278-284.

earned] can be redeemed in the form of a cash rebate and 25% will be in the form of Varsity Fashion Dollars"; "After your last Varsity Family Plan event for the 2016-2017 season, fax or email your completed W9 before the rebate deadline to claim your rebate. Please allow 6-8 weeks for processing."; and "Varsity Fashion Dollars must be used by August 1, 2017."[539] As previously described, in contrast to what Varsity claimed in its promotional materials, the transaction-level data it produced in this litigation for the amounts of rebates paid shows that 35% of the rebates were paid out in Varsity Fashion Dollars for the 2016-2017 season through the 2019-2020 season.[540]

480. Dr. Murphy does not describe whether the "coupons or other discounts" that he has in mind have an expiration date. Fashion Dollars, like gift certificates, are only "coupons or other discounts" if they are used by the customer. If they are not used, they are worthless pieces of paper. Dr. Murphy did not offer any opinions on the redemption rate for Fashion Dollars and did not perform any calculations of the redemption rate for Fashion Dollars.

481. All-Star gyms earn Fashion Dollars through the course of the competition season, which runs through April and May. All-Star gyms cannot receive the Fashion Dollars until after their last Varsity event of the season and must file W9 paperwork and wait 6-8 weeks for processing.[541] These gift certificates expire on August 1st, which would be only a few weeks after they are received by the All-Star gyms.

V.C.3. Prohibiting sales of rival apparel at Varsity events forecloses apparel competition

482. Dr. Murphy writes "Plaintiffs' experts claim that Varsity's refusal to allow competing apparel producers to sell merchandise at Varsity All Star competitions creates significant barriers to entry for apparel producers by foreclosing access to a substantial portion of their potential customers."[542]

483. Dr. Murphy cites to the Complaint for his support of what "Plaintiffs' experts claim."[543] He mischaracterizes my opinions on the issue and provides no citation to my report for where

[539] VAR00020214, at -214.
[540] See VAR00352214. Varsity promotion materials describe the increase in the fraction of rebates paid out in Varsity Fashion Dollars for the 2018-2019 season. See VAR00007743, at -765.
[541] VAR00020214, at -214.
[542] Murphy Report, ¶ 375 (internal citations omitted).
[543] Murphy Report, ¶ 375.

he claims I make this assertion. As I opined in my first report, "Varsity has allegedly engaged in conduct to prohibit rival cheer apparel producers from displaying their merchandise at Varsity cheer competitions. As Varsity produces the largest and most prestigious cheer competitions in the United States, this prohibition allegedly has disadvantaged Varsity's rivals in competing with Varsity in the cheer apparel market."[544]

484. Dr. Murphy writes "Plaintiffs' experts fail to consider that apparel suppliers have multiple channels by which they can—and do—market their products to consumers."[545]

485. Dr. Murphy writes, "[c]ontrary to Plaintiff's experts' assertions that competitions are 'important marketing and sales opportunities' for apparel vendors, record evidence suggests that apparel purchases are not typically made at All Star competitions."[546]

486. All of Dr. Murphy's arguments are mere conjectures and are unsupported by evidence on the record. His unsupported opinions are that rival apparel companies are not harmed by being prevented from selling at Varsity events; that they have other sales channels to reach customers; and that Varsity events really aren't that important for their business anyway.[547] Each of these three opinions, related to each other through the economics of how apparel companies reach customers, are contradicted by the documented experience of the rival cheer apparel company Nfinity.

487. Nfinity is an established cheer apparel company. Nfinity sells through "other promoters' competitions and online platforms, such as Amazon."[548] Yet, due to Varsity's restrictions, they are unable to sell their products at Varsity events. This constitutes a significant barrier to entry for would-be entrants and has constituted a significant barrier to further expansion for Nfinity. The evidence of Varsity's conduct and the effects on Nfinity are demonstrated in internal Nfinity email correspondences. First, in 2016, Varsity "reach[ed] out to [Nfinity] about the possibility of Varsity acquiring Nfinity" and Nfinity responded with acquisition options intended to "drive the revenue or the synergy of the Brand Nfinity with the distribution machine that is Varsity."[549] One aspect of distribution is the ability to reach

[544] Heeb Report, ¶ 95. See also VAR00067447, at -448; VAR00370795, at -796; VAR00421817, at -818.
[545] Murphy Report, ¶ 376 (internal citations omitted).
[546] Murphy Report, ¶ 376 (internal citations omitted).
[547] Murphy Report, ¶ 376.
[548] Murphy Report, ¶ 253.
[549] NFINITY000069, at -069 (DESIGNATED HIGHLY CONFIDENTIAL – EXPERT AND ATTORNEYS' EYES ONLY).

customers at Varsity events. Second, in 2017, Varsity reached out to Nfinity to establish a distribution agreement in which Varsity would be an exclusive distributor for Nfinity products.[550] Under the proposed terms, Nfinity would sell five products "through Varsity and Nfinity direct business only," meaning that Nfinity would be willing to forgo sales of those five products through alternative channels for the opportunity to sell via the Varsity sales channel.[551] Third, and finally, in 2021, Nfinity reached out to Varsity to establish a "sponsorship and on-sight vendor relationship for the 21-22 season."[552] That Nfinity had to establish a relationship (and pay for it) for the right to sell at Varsity events in the 2021-2022 season indicates that it did not have that privilege previously and that its ability to sell at Varsity events would represent significant value for the company.

488. Dr. Murphy proposes an analogy to merchandizing at professional sporting events.[553] But the analogy is not apt. There are many examples of competitors gathering at events at which their customers are congregated to display and market their products to a targeted audience. Those vendors would typically pay a fee to the promoter or venue to compensate for such access. The concern here is that Varsity has diversified into related product markets and uses the monopoly power in one market to exclude rivals in one of the related markets from access to their mutual customers, enhancing its market power in the related market.

489. It is improper, as Dr. Murphy has done, to focus exclusively on the "protection of the brand" as a procompetitive justification without recognizing the anticompetitive conduct to acquire, establish, and use that "brand" to further enhance market power.

V.C.4. Varsity's camp attendance requirements for postseason competitions forecloses camp competition

490. Dr. Murphy states, "Plaintiffs' experts provide no basis for their conclusions that the camp requirements are anticompetitive."[554] The camp requirements that Dr. Murphy references is the squad credentialing requirement, which requires that 75% of team members must

[550] NFINITY000071, at -073 (DESIGNATED HIGHLY CONFIDENTIAL – EXPERT AND ATTORNEYS' EYES ONLY).
[551] NFINITY000071, at -072 (DESIGNATED HIGHLY CONFIDENTIAL – EXPERT AND ATTORNEYS' EYES ONLY).
[552] NFINITY000088, at -089 (DESIGNATED HIGHLY CONFIDENTIAL – EXPERT AND ATTORNEYS' EYES ONLY).
[553] Murphy Report, ¶ 477.
[554] Murphy Report, ¶ 378 (internal citations omitted).

complete the credentialing at a 2-day or longer Varsity camp to compete at NCA and UCA's school national championships.[555] Given Varsity's established market power in the cheer competitions markets, particularly for postseason events such as the NCA and UCA school national championships, the requirement creates a strong incentive for 75% of the athletes on school teams to attend a 2-day or longer Varsity camp. This restriction, when viewed through the lens of all elements of Varsity's anticompetitive scheme, analyzed in their totality, does have anticompetitive effects as it is a mechanism by which Varsity can leverage is market power in the cheer competitions markets to acquire a dominant position in the cheer camps markets.

491. As previously described, an email from a coach illustrates that safety is not the primary objective behind the squad credentialing requirement: "The marketing is great, 'certify your team so you're safe,' 'partnership with NFHS,' but I am AACCA certified, NFHS certified, and USASF certified through level 5, not to mention that I started coaching in 1995. When I got each of those certifications, you told me that was enough to do those exact same things, but all the sudden, it is not enough."[556]

492. Jeff Webb's remarks at the 2017 Varsity Spirit Rally highlighted that summer camp revenue increased $3.5 million in 2016, the year the credentialing program went into effect, "with significant growth across the country in every camp region."[557]

493. Dr. Murphy writes, "Plaintiffs' assertions that all or even a substantial portion of Varsity's camp customers were foreclosed to competitors is clearly incorrect."[558] He further states in a footnote, "Dr. Heeb's assertion that school cheer competitions drive increases in camp revenue is also doubtful given the clearly larger scale in terms of participants and revenues

[555] VAR00160802 (Duhon Exhibit 5), at -802 ("The Varsity Spirit/NFHS Squad Credentialing program will again be implemented at all camp types for UCA, NCA, USA, V!ROC and Premier camps this summer that are at least two days long. We feel very strongly that this program is one more way we can ensure that cheerleaders understand their role, are knowledgeable about cheerleading safety and achieve success on and off the sidelines. Because this is important to us, the Squad Credentialing program will be a requirement for participation in the following competitions: NCA Junior & Senior High School Nationals Championship in January 2018 and National High School Cheerleading Championship (NHSCC) with UCA – requirement began in 2017"); VAR00160803, at -803 ("Q: How many squad members need to attend camp? A: We require that 75% of the members competing must have completed Squad Credentialing.").

[556] VAR00153399, at -401. Email with subject line NCA and the Varsity Spirit/NFHS Squad Credentialing Program!

[557] VAR00201278, at -293.

[558] Murphy Report, ¶ 386 (internal citations omitted).

that Varsity's camps business has relative to its scholastic competitions business."[559]

494. Contrary to Dr. Murphy's statement, I nowhere in my first report "assert[] that school cheer competitions drive increases in camp revenue."[560] Dr. Murphy provides no citation for where he claims I make this assertion.

495. My opinion, as offered in my first report, is that Varsity's squad credentialing program is a restriction that forces some school teams that want to compete in national school competitions (for either NCA or UCA brand competitions) to have 75% of its team members attend a multi-day Varsity camp in the summer.[561] While I did not quantify how many school customers are affected by this restriction or how much revenue is captive by this restriction (i.e., revenue collected from affected school customers that would not otherwise be collected absent the restriction), I do analyze this conduct in the context of all elements of Varsity's anticompetitive scheme. This conduct, the squad credentialing program, has anticompetitive effects in the context of Varsity's anticompetitive conduct in the cheer competitions markets (specific to school customers) and in the cheer camps markets.

V.D. My Empirical Price Analysis Demonstrates Harm to Competition

V.D.1.a) Updates to my overcharge calculations reflecting Dr. Murphy's critiques

496. Dr. Murphy claims that the regression analysis in which I established the 23.8% overcharge is "flawed and unreliable."[562] I strongly disagree with this conclusion, and I address each of Dr. Murphy's critiques in the following paragraphs. I have incorporated some of the changes recommended by Dr. Murphy, including calculating inflation adjusted prices, incorporating additional competitive benchmark data identified by Dr. Murphy, and correcting the treatment of discounts for Aloha acquired events.[563] I have updated my analysis with these changes, and confirmed that my qualitative results and opinions are largely unchanged. After implementing those changes recommended by Dr. Murphy with which I concur, the updated

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[559] Murphy Report, ¶ 386, note 610 (internal citations omitted).
[560] Ibid.
[561] Heeb Report, ¶ 184 ("pursuant to the anticompetitive scheme, Varsity requires that its school teams seeking to attend certain marquee national competitions must complete a credentialing program that is only offered at Varsity camps.").
[562] Murphy Report, ¶ 388 (internal citations omitted).
[563] I describe my inflation adjustment, translating all prices and other dollar amounts, particularly the regression inputs, into 2018 constant dollars, at ¶ 90.

calculation shows an overcharge estimated at a common level across all five regional markets to be slightly higher than I previously estimated, and equal to 27.4% (revised from 23.8% previously estimated). Based on these changes, in my opinion this new estimate represents the most reliable estimate of average overcharges for cheer competitions.

497. In my opinion, Dr. Murphy does not offer a reliable alternative to this estimate of the magnitude of competitive harm.

498. In my discussion below, I point out why I disagree with several of Dr. Murphy's other arguments, suggestions, and criticisms. I also point out modeling alternatives suggested by Dr. Murphy are inappropriate and would be incapable of accurately detecting and measuring overcharges if they do exist.

V.D.1.b) My competition overcharge analysis is based on a properly identified competitive benchmark

V.D.1.b(i) Varsity was a monopolist and charging supracompetitive prices before the data period

499. Dr. Murphy writes, "Dr. Heeb's 'competitive benchmarks' … are not reliable benchmarks for what prices of the acquired or non-acquired competitions would have been in the but-for world". I strongly disagree. Dr. Murphy has offered no empirical analysis and no compelling arguments as to why he would expect the pre-acquisition prices to be lower than what Varsity's legacy brands would have been priced at in the but-for world" in which they were priced competitively.[564]

500. Dr. Murphy does not explain explicitly why acquisition target brands would price their events below the competitive level of their events, or how Varsity would profitably be able to substantially raise the prices of those events at its first opportunity, to a price-level reflective of Varsity's legacy events. However, he does articulate the logic that would have guided Varsity's strategy to raise the price of a previously competitively-priced event, in a discussion of a related topic. In his discussion of the hypothetical monopolist test, Dr. Murphy notes that a price increase that would not be profitable for a competitive firm would be profitable for a monopolist (and this also is true for a firm with a dominant market share) "because even when consumers switch away from the reference event to other events in that

[564] Murphy Report, ¶ 395 (internal citations omitted).

same area, the monopolist [likely] earns profits from their purchase" since the monopolist (in this case Varsity) owns most of the other events in the area.[565]

501. First, in the but-for scenario, absent Varsity's anticompetitive conduct, not only is Varsity pricing at competitive levels, and refraining from its other anticompetitive conduct like the conditional rebate programs, but Varsity also has not already acquired other large competitors, providing it with the ability and the incentive to price above the level that other producers can sustain. This is exactly the competitive benchmark that I employ in my regression analysis.

502. Second, the other important aspect of the but-for scenario is that Varsity would be operating in a world not only without the contemporaneous anticompetitive conduct, and absent the most recent anticompetitive acquisitions, but also absent the market power and ability to charge supracompetitive prices that Varsity had obtained by conduct that predates the acquisitions that I have analyzed. Those recent acquisitions preserved and maintained Varsity's monopoly position attained prior to 2014.[566] In other words, Varsity already has monopoly power by the beginning of the analysis. To assume, as Dr. Murphy has, that one must detect an upward change in Varsity's pricing in response to the current allegations is to commit the "cellophane fallacy." That is, to assume that the conduct being studied is the beginning of the monopolist's power, rather than an exercise and preservation of already existing market power.[567] One sees the evidence of the monopoly power and magnitude of the price elevation in the prices of events as they fall under the monopolist's control.

503. As I detailed in my first report and previously in this report, Varsity had acquired sufficient market power to sustain elevated event prices before 2014.[568] Identifying the competitive price level for the legacy events is not possible as available data was produced no earlier than the 2013-2014 season, which is after Varsity had acquired a dominant market share position

[565] Murphy Report, ¶ 192 (internal citations omitted).
[566] I have no opinion as to whether or not Varsity's conduct in attaining market dominance prior to 2014 would have been in violation of the antitrust laws. I only point out that Plaintiffs' theory does not require a price elevation of Varsity's legacy pricing as a result of any of the acquisitions since 2014. It only requires evidence that that legacy price level is above the competitive benchmark and that the conduct tends to reinforce and sustain that elevated price level. There is ample evidence for this price premium.
[567] See, Heeb Report, ¶ 108, footnote 99.
[568] See, e.g., Heeb Report, ¶ 54 ("Whereas Varsity's market power was already, at the beginning of the Class Period (December 10, 2016, to present), uncompetitively high, this [anticompetitive acquisitions of competitors] conduct also sustained, preserved and extended that monopoly power.").

and sustained premium prices. As I show in Table 32 and Table 33, Varsity acquired 11 rival event producers between 2004-2012, including 12 World Bids Events. Thus, the most reliable benchmark for the competitive price level for cheer competitions in the 2013-2014 season is the prices that were charged by the non-Varsity event producers in the 2013-2014 season. Similarly, the competitive price level for cheer competitions in the 2014-2015 season is the prices that were charged by the non-Varsity event producers in the 2014-2015 season, and so forth. Varsity's decision and ability to immediately raise the prices of acquired and continued events by an amount similar to the Legacy price premium reinforces this interpretation, as does the introduction of new events under the acquired brands at elevated price levels comparable to legacy events.

504. I have data on non-Varsity event producers and the prices they charged from the pre-acquisition registration records for seven companies that Varsity would later acquire: JamBrands (acquired in 2015), Aloha (acquired in 2016), Spirit Celebration (acquired in 2017), All Things Cheer (acquired in 2017), CSG (acquired in 2017), Mardi Gras Spirit (acquired in 2017), and EPIC (acquired in 2018). The competitive benchmark consists of the prices set by a variety of non-Varsity competitors in the markets.[569]

V.D.1.b(ii) REGRESSIONS ESTIMATING OVERCHARGE RELATIVE TO A COMPETITIVE BENCHMARK SHOULD NOT INCLUDE SEASON DUMMY VARIABLES

505. Dr. Murphy correctly observes that the table presenting the overcharge regression in my first report contained a template for a yes-no indication for a variety of possible "dummy variable" flags that could be included in various analyses. Unfortunately, that template incorrectly indicated that the regression included monthly and season dummy variables. If fact, those variables were not included, and were not intended to be included in that regression. Dr. Murphy notes that the regression results shown in that table and throughout the report are identified correctly in the backup materials that I provided. In other words, this minor copy and paste error consisted of the template beneath the table of otherwise correct regression

[569] The competitive benchmark additionally incudes acquired brand event pricing during the year of acquisition (operated by Varsity, but prices set by the previous owner under Varsity's "do no harm" acquisition policy) and acquired brand event pricing for events that Varsity would later discontinue (operated by Varsity, priced by Varsity, but later discontinued). See Heeb Report, ¶ 287.

results that incorrectly noted a 'yes' instead of a 'no' for those two dummy variables.[570]

506. The regressions that I executed to calculate the overcharge, as is clearly evidenced in my backup materials, contain neither a season dummy variable nor a monthly dummy variable, and they never were intended to. The inclusion or exclusion of a monthly dummy variable has a negligible effect on the regression estimates in this context, and thus it is irrelevant as a practical matter. As a statistical matter, inclusion of such a variable would not be appropriate given that I use event-specific fixed effects, which obviates the most likely need for monthly variables.

507. In contrast, the question of the inclusion or not of season dummy variables (annual variables corresponding to a particular cheer competition season, e.g., 2014-2015, 2015-2016, etc.) is not innocuous. As Dr. Murphy correctly argues, it would be nonsensical for a regression model like mine to include season dummy variables as "these season dummies could only pick up an overall trend in competition prices."[571] More precisely, they would tend pick up any systematic year to year changes, and to become confounded with any other variable that has a similar pattern.

508. I agree, which is why I never considered including such a strategy. My theory and my empirical model estimate the overcharge based on differences between pre-acquisition benchmarks and Varsity-determined prices (adjusting for inflation). Because the pre-acquisition benchmarks tend to be earlier chronologically compared to the events to which they are compared. Thus, a season dummy would pick up both a secular price trend and any price changes between pre-acquisition events in one year and the post-acquisition Varsity pricing. This would obfuscate the overcharge variable, as any overcharges would be reflected jointly with the overcharge variables and any price trend. The result would be nonsense, as Dr. Murphy demonstrated when he added season dummies to his replication of my model.[572]

509. This problem is also the reason that Dr. Murphy's replication of my model becomes uninterpretable when he adds a variable which he intended to represent the time trend in popularity of cheer. This variable has the same confounding effect. It picks up any trend in the price, both changes in supply and demand conditions, such as a change in costs related

[570] Compounding this editing error, a nearby list of variable descriptions also included the description of those variables, drawn from the same incorrect table.
[571] Murphy Report, ¶ 397.
[572] Murphy Report, Exhibit 57.

to increasing industry demand, as well as anything related to the comparison of the benchmark prices with the Varsity's allegedly monopoly pricing.

510. Dr. Murphy expresses concern that my overcharge regression lacks time-varying controls.[573] To account for time varying factors that may affect prices, I have added event specific costs to the regression specification. This has a number of advantages. First, it provides a time-varying control for factors that affect price. In particular, it controls directly for the factor that Dr. Murphy seeks to account for indirectly with his introduction of a trend variable purporting to represent the increasing popularity of cheer. The reason that increasing demand often (but not always) leads to increasing prices is that if supply is constrained, then supplying the additional demand often requires adding more expensive inputs. For example, if the most cost-effective venues are chosen first, then an increase in demand might require new events to utilize more expensive venues, judges, etc. That is, increased demand could drive up costs, which in turn would drive up prices.

511. The second advantage of measuring costs directly (rather than using an increasing demand trend) is that there is no reason to think that increasing costs would be associated with increased Varsity market power, so there is little risk that cost changes measured directly would obfuscate the measurement of overcharges. Finally, the cost measure captures a variety of elements of underlying costs (venues, judges, decorations, music, etc.) that might be changing over time or across geography. Thus, it also addresses an additional concern expressed by Dr. Murphy, that unknown differences across geographies may be causing unmeasured differences in the determinants of prices.[574]

512. The only drawback to including cost information is many Varsity events do not have costs reported, so the number of observed events is reduced by the need to exclude observations without the relevant data. Nonetheless, the inclusion of cost regressions demonstrates that the magnitude of estimated overcharges is similar after controlling for time varying, event specific (and hence geography specific) measures of directly relevant factors driving prices. Because the reduction in the number of events required to do this analysis, I present these results as evidence to refute Dr. Murphy's criticisms and conclusions regarding his alternative control variable. I consider these cost regressions to be corroborative of the more

[573] Murphy Report, ¶ 397.
[574] Murphy Report, ¶ 400.

precise and robust main results.

V.D.1.b(iii) *DEMAND CONTROLS*

513. Dr. Murphy writes, "Dr. Heeb does not incorporate any demand-side controls that vary over time in the overcharge regressions" […] "Furthermore, he does not control for the duration of competitions, despite the evidence, discussed in Section IV.E, that 1-day and 2-day competitions are priced differently."[575]

514. I describe in detail below why the demand controls implemented by Dr. Murphy are unreliable and inappropriate for the regressions. I have also noted that I have implemented a regression which includes costs, a time-varying and geographically-varying direct measure of factors implicating prices. These results corroborate my conclusions from my main regressions.

515. Dr. Murphy's argument that I do not control for duration of events between 1-day and 2-day events is not correct. I do not understand how he came to this conclusion. I implement a fixed effects methodology whereby I use event-specific dummy variables to control for event-specific factors, which include event location, event date during the season, event size, customer appeal, event branding, event prestige, and duration of event. The fixed effects methodology controls for the duration of competitions, provided that an event does not switch from a 1-day event to a 2-day event (or vice versa). Dr. Murphy has presented no clear evidence that an event (identified as the same event from one season to the next based on my analysis) ever switches from a 1-day event to a 2-day event.

516. After the filing of his report, Dr. Murphy's testimony includes new claims that, based on his understanding, the Mardi Gras Extravaganza National (a World Bids Event) was originally a 1-day event pre-acquisition and changed to a 2-day event post-acquisition.[576] This is not consistent with my understanding.[577] Table 60 displays the complete raw data file from Mardi Gras Spirit, and this clearly shows that the "MG Extravaganza" event occurred on the dates that I detailed above. Even if this singular example turns out to represent a change of an event from 1-day to 2-days, this would not reduce my confidence that the event-specific

[575] Murphy Report, ¶ 398 (internal citations omitted).

[576] Murphy Deposition, November 4, 2022, 69:16-25 ("that's about the Mardi Gras Extravaganza event. And that event was actually changed from a one-day event to a two-day event. And so that, I think, is something I learned subsequent to the report.").

[577] I discuss this event at ¶ 456.

fixed effect is the most effective way to address event specific characteristics. I am not aware of any other event purported to have changed its duration.

V.D.1.b(iv) PRICE OVERCHARGE FOR SCHOOL COMPETITIONS

517. Dr. Murphy argues that my conclusion that All Star and school-sponsored cheer is in the same market is a "fundamental error" that is especially severe because there are no competitive benchmarks for school-sponsored cheer events.[578] Dr. Murphy and I, in our respective reports including this one, have argued at length about this issue. These are competitions between teams of athletes engaging in nearly identical activities, judged by the same criteria, competing at events produced by the same producers, within the same geographies. Individuals may compete in one and then the other disciplines from one year to the next, although not within the same year.

518. Data for school events are included within the same regression, using the same benchmarks prices and event, and by construction, the same monopoly overcharge. There are no candidates for separate benchmark events for school among the acquired event data. If such data existed, we could test Dr. Murphy's hypothesis school overcharges are materially different. In the absence of such data, in my opinion the best available evidence for the magnitude of overcharges for both disciplines, and therefore for school-sponsored Class Members as well, is the common overcharge estimated using all available relevant data for the Class consisting of participants in both disciplines.

V.D.1.b(v) LOCAL EFFECTS

519. Dr. Murphy argues that I have not made "any attempt to control for how the local competitive environment may have affected cheer competition price" or control for how local markets may differ.[579]

520. This criticism is neither correct nor up to date. In my first report, I analyzed the distribution of Varsity events geographically, and showed that Varsity's high degree of market power is nearly ubiquitous even in local geographies much smaller than even Dr. Murphy argues is the appropriate market definition. This analysis was used to demonstrate that there are few if any geographic pockets of Class Members for whom local competitive conditions are so

[578] Murphy Report, ¶ 399 (internal citations omitted).
[579] Murphy Report, ¶ 400 (internal citations omitted).

different from the average conditions over the wider regions in which they are located that they may not have experience antitrust injury.[580]

521. In this report, I have offered two very different analyses that both separately address Dr. Murphy's concerns. First, I have extended the analysis of market power using CSA and MSA level data to four different sizes of local market conditions. I have estimated Varsity's market power at the MSA level (replicating and refining my earlier analysis), as well as at 100-mile radius circles around each MSA, 250-mile radius circles, and 500-mile radius circles. The 100-mile radius is approximately what Dr. Murphy claims to be 1-day event radius. The 250-mile radius corresponds approximately to his claimed 2-day event radius. The 500-mile radius corresponds to a larger radius, reflecting the distances that some participants travel, and the recognition that competition between events located between the event at the center of the circle and events beyond boundary of Dr. Murphy's market may convey the competitive price discipline beyond the narrower boundaries. If event A at the center of a market competes sufficiently to discipline the price of event B near the boundary, and event B competes in turn with event C located beyond the direct competitive reach of A, it is still clear that competition from A has indirectly imposed a competitive restraint on event C. These analyses confirm that Varsity's market power in presumptively high for most Class Members.

522. Second, I have implemented the overcharge regressions incorporating costs as a control that varies by both time and event, that is directly relevant for local event-specific pricing. These regressions corroborate the conclusions from my updated main regressions.

V.D.1.c) My updated competition overcharge analysis estimates a 27.4% overcharge on Varsity competitions, common across all regional markets

523. Dr. Murphy writes repeatedly throughout his report that I "claimed" to include seasonal and monthly "dummy" variable in my overcharge regressions. [581] I made no such claim.[582] As I have explained, what Dr. Murphy is referring to is a copy and paste error.

524. Dr. Murphy then "corrects" my regression to correspond to the copy and paste error in the

[580] Heeb Report, Table 27.
[581] Murphy Report, ¶ 401 (internal citations omitted).
[582] I discuss this at ¶ 505.

presentation table. The regression results that obtain from intentionally imposing this econometrically illogical specification are meaningless. Interestingly, they do reveal how the introduction of an inappropriate variable with certain specific characteristics can confound and obscure an otherwise reasonable estimate of overcharges. I discuss this above.

525. Dr. Murphy writes, "[w]hile correcting for his omission of seasonal and monthly fixed effects alone shows that Dr. Heeb's regression model leads to no overcharges in four of the five USASF regions, there are additional errors and omissions in his regressions that also render his reported overcharge results unreliable" and then identifies his Exhibit 58 as containing the regression results that he obtains when correcting for what he claims are errors in my analysis.[583]

526. Dr. Murphy repeats many of his arguments throughout his report, in different section. For example, Dr. Murphy writes (repeatedly) that, "Dr. Heeb omits control variables for the differences in event types, specifically between 1-day and 2-day competitions. ... Dr. Heeb fails to control for any such price differences between 1-day and 2-day competitions."[584] This argument is not correct. I implement a fixed effects methodology whereby I use event-specific dummy variables to control for event-specific factors, which include event location, event date during the season, event size, customer appeal, event branding, event prestige, and duration of event. The fixed effects methodology controls for the duration of competitions

527. Dr. Murphy states, referring to his Exhibit 58, that when my original regression model is "corrected," the estimated national overcharge coefficient [changes] from 0.272 to 0.163."[585] Dr. Murphy is correct that the national overcharge coefficient equals approximately 16% when my price overcharge methodology, including appropriate updates implemented in this report, is applied to Dr. Murphy's model in which conditional rebates are deducted from prices to define the dependent variable. I disagree that this is the appropriate economic definition of price. The analysis that I describe below are determined using a dependent variable in which rebates are deducted from prices. It is telling that even with rebates deducted from prices, the national overcharge still equals 16%. I discuss elsewhere why this is significant in the context of Dr. Murphy's demand controls.

[583] Murphy Report, ¶ 403 (internal citations omitted).
[584] Murphy Report, ¶ 407 (internal citations omitted).
[585] Murphy Report, ¶ 408 (internal citations omitted).

V.D.1.c(i) PRIMARY REGRESSION RESULTS

528. First, let me summarize the main updates to the competition overcharge analysis, relative to my first report: (1) removed discounts that were previously applied to Aloha brand events (pre-acquisition); (2) included pre-acquisition price information for All Things Cheer and Spirit Celebration events; (3) applied inflation adjustments so that the relevant price comparisons are real price comparisons; and (4) report both non-robust and robust standard errors in my regression output and apply robust standard errors in my hypothesis testing. These updates have been described by Dr. Murphy and previously described above.

529. One additional update that I make is to exclude registration information for athletes on "Dance Studio" and "Youth/Youth Group" teams. These athletes are not members of the Class in this investigation. The athletes in the Class include athletes on All-Star teams and athletes on school teams, where school teams in competitive cheer are distinguished from sideline cheer teams based on their attendance at cheer competitions.

530. Second, I will describe the empirical methodology for the competition overcharge analysis. The methodology is implemented by comparing Varsity competition prices to the competitive benchmark. The competitive benchmark is the set of prices for the following events:

- Events produced by rival event producers — rival event producers pricing *before* they were acquired by Varsity;
- Events produced in the first season of Varsity ownership after its acquisition of the companies — under its "do no harm" strategy, Varsity chose not to change the event pricing, date, or location of the acquired events in the first season;[586] and
- Events produced under Varsity ownership that were acquired by Varsity from acquisitions of rival event producers since 2014 and later discontinued by Varsity.

531. I obtain the competitive benchmark prices from the registration records maintained by Varsity and the rival event producers, including Cheer Ltd., JamBrands, Aloha, Spirit

[586] During the acquisition season, registration was already open for events and Varsity adopted a "do no harm" approach in which they maintained the competitor registration websites, procedures, and prices. See, e.g., VAR00083645, at -648 ("Short term (first 6 months) we will take a general 'do no harm' position."); VAR00017827, at -830 ("Short term (first 3 months) we will take a general 'do no harm' position."); VAR00081770, at -773 ("Short term (first 3 months) we will take a general 'do no harm' position."); VAR00017807, at -810 ("Short term (first 6 months) we will take a general 'do no harm' position."); and VAR00076749, at -758 ("Short term (first 6 months) we will take a general 'do no harm' position.").

Celebration, All Things Cheer, CSG, Mardi Gras Spirit, and EPIC. Each of these companies had a vastly smaller market share than Varsity and each is assumed to be pricing subject to the incentives and pressures of market competition. As such, this set of competitive benchmark prices is the basis for my estimate of Varsity prices in the but-for scenario.

532. The registration data reports total registration fees per team per event, total discount per team per event, and total athletes per team per event. Net fees are defined as registration revenues less discounts. Net fees per athlete (equivalently, price) is defined as total net fees (i.e., summed over all participating teams) divided by the total number of athletes registered for that event (i.e., summed over all participating teams). I adjust nominal prices for inflation using CPI data. This adjustment transforms the nominal prices to real prices. The dependent variable is further transformed to the natural log of real price. The natural log specification is common in multiple linear regression methodology, and particularly for damage modeling.

533. The explanatory variables for the regression include: a dummy variable to indicate the event brand, where all brands in the data sample were acquired by Varsity from 2014-2018; a dummy variable to indicate the region of the event (USASF regions are Midwest, Northeast, Southeast, Southwest, and West); a dummy variable to indicate if it is a regular-season or a postseason competition, which is subsequently interacted with the event region dummy variables to generate region-specific postseason dummy variables; a dummy variable to indicate whether the event offered bids to Worlds, which is subsequently interacted with the event region dummy variables to generate region-specific World Bids Event dummy variables; and a dummy variable to indicate if the event price was set by Varsity (post-acquisition) or by the independent rival (pre-acquisition). This latter dummy variable equaled 1 if the event price was set by Varsity and equaled 0 if it was not. This “overcharge” dummy variable was subsequently interacted with the event region dummy variables to generate region-specific “overcharge” dummy variables.

534. The main regression weights each observation by the number of athletes at that event (to proxy for event size). I also implemented an unweighted regression and found that the regression predictions are largely consistent (see Table 59).

535. Table 23 below reports the regression output. Regressions 1 and 2 report the regression coefficients for the model with region-specific overcharges (Regression 1 with non-robust standard errors and Regression 2 with robust standard errors); sand Regression 3 and 4 report

the regression coefficients for the model with a single national overcharge (Regression 3 with non-robust standard errors and Regression 4 with robust standard errors). Standard errors are reported in parentheses below the coefficient values. Asterisk next to the coefficient values indicate statistical significance at the 1% (***), 5% (**), and 10% (*) levels.[587]

536. For all coefficients, the signs estimated from the regression match the economics of cheer competitions. First, postseason events are more expensive than regular-season events (the coefficient on the dummy variable for postseason events is positive and statistically significant in each of the regions). Second, World Bids Events are more expensive than events without bids for Worlds (the coefficient on the dummy variable for World Bids Events is positive and statistically significant in each of the regions). Third, school competitions are less expensive than All-Star competitions (the coefficient on the dummy variable for school competitions is negative and statistically significant in each of the regions). And fourth, as I discuss further below, competitions with prices set by Varsity (i.e., overcharge dummy variable) are more expensive than the competitive benchmark defined as competitions with prices set by Varsity's competitors (the coefficient on the overcharge dummy variable is positive and statistically significant in four of the five regions and nationally).

Table 23. Regression Output for Overcharge Model

Dependent Variable: Log Real Price				
	(1)	(2)	(3)	(4)
VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Postseason Flag in MW	0.924***	0.924	0.988***	0.988
	(0.192)	(0.692)	(0.186)	(0.694)
World Bids Event Flag in MW	0.502***	0.502***	0.486***	0.486***
	(0.062)	(0.058)	(0.061)	(0.059)
School Flag in MW	-0.991***	-0.991***	-1.002***	-1.002***
	(0.072)	(0.072)	(0.072)	(0.071)
Postseason Flag in NE	-0.003	-0.003	-0.084	-0.084
	(0.085)	(0.087)	(0.079)	(0.086)
World Bids Event Flag in NE	0.541***	0.541***	0.560***	0.560***
	(0.051)	(0.035)	(0.051)	(0.035)
School Flag in NE	-1.120***	-1.120***	-1.101***	-1.101***
	(0.107)	(0.106)	(0.107)	(0.105)
Postseason Flag in SE	2.012***	2.012***	2.014***	2.014***

[587] A coefficient value with statistical significance at the 1% level means that there is a 1% probability (or less) that the data was generated by a model in which the coefficient value equals 0. At such a significance level, there is strong support (greater than 99% confidence) that the coefficient value is ***different*** from 0.

	(0.039)	(0.164)	(0.039)	(0.164)
World Bids Event Flag in SE	0.486***	0.486***	0.488***	0.488***
	(0.030)	(0.056)	(0.030)	(0.056)
School Flag in SE	-0.868***	-0.868***	-0.866***	-0.866***
	(0.059)	(0.061)	(0.059)	(0.060)
Postseason Flag in SW	-0.101	-0.101	-0.100	-0.100
	(0.249)	(0.086)	(0.249)	(0.085)
World Bids Event Flag in SW	0.656***	0.656***	0.657***	0.657***
	(0.038)	(0.057)	(0.038)	(0.057)
School Flag in SW	-0.944***	-0.944***	-0.943***	-0.943***
	(0.061)	(0.068)	(0.061)	(0.068)
Postseason Flag in W	-0.014	-0.014	0.027	0.027
	(0.209)	(0.085)	(0.209)	(0.053)
World Bids Event Flag in W	0.596***	0.596***	0.590***	0.590***
	(0.045)	(0.050)	(0.046)	(0.050)
School Flag in W	-1.337***	-1.337***	-1.347***	-1.347***
	(0.040)	(0.062)	(0.040)	(0.061)
Overcharge Flag in MW	0.267***	0.267***		
	(0.042)	(0.030)		
Overcharge Flag in NE	0.420***	0.420***		
	(0.047)	(0.031)		
Overcharge Flag in SE	0.359***	0.359***		
	(0.059)	(0.055)		
Overcharge Flag in SW	0.338***	0.338***		
	(0.078)	(0.055)		
Overcharge Flag in W	0.105	0.105		
	(0.085)	(0.068)		
Overcharge Flag			0.320***	0.320***
			(0.025)	(0.020)
Constant	4.050***	4.050***	4.067***	4.067***
	(0.078)	(0.055)	(0.033)	(0.036)
Observations	2,613	2,613	2,613	2,613
R-squared	0.774	0.774	0.773	0.773
Weighted by Athlete Count	Yes	Yes	Yes	Yes
Region Dummies	Yes	Yes	Yes	Yes
Event Dummies	Yes	Yes	Yes	Yes
Controls for Cost	No	No	No	No
Robust Standard Errors	No	Yes	No	Yes

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Sources: Varsity Registrations Data; Pre-Acquisition Data; World Bids Events Data.

537. The coefficients on the regional overcharge dummy variables in Table 23 (Regression 2) are the estimates of Varsity's overcharge for its cheer competitions under this dummy variable model, with robust standard errors.

538. To determine if it is more appropriate to use regional or national level overcharge estimates, I estimate overcharges both ways, and then do a statistical test to compare the alternative approaches. The coefficient on the national overcharge dummy variable in Table 23 (Regression 4) are the estimates of Varsity's overcharge for its cheer competitions across all five geographic regions under this dummy variable model, with robust standard errors.

539. Table 24 below illustrates the overcharge estimates and the F-test results for the regional and national overcharge dummy variable regressions (Table 23, Regressions 2 and 4).

Table 24. Price Overcharge for Varsity Cheer Competitions

Region	Overcharge	Robust Standard Error	t-statistic	P-value	95% Confidence Interval, Lower Bound	95% Confidence Interval, Upper Bound
MW	23.4%	0.030	8.97	0.000	18.8%	27.8%
NE	34.3%	0.031	13.68	0.000	30.2%	38.1%
SE	30.2%	0.055	6.54	0.000	22.2%	37.3%
SW	28.7%	0.055	6.15	0.000	20.6%	35.9%
W	9.9%	0.068	1.54	0.124	-2.9%	21.2%
F-Test	H0: Overcharge_MW = Overcharge_SE = Overcharge_SW					
	F(2, 2448) = 1.43					
	Prob > F = 0.24					
ALL REGIONS	27.4%	0.020	16.27	0.000	24.5%	30.1%

Sources: Varsity Registrations Data; Pre-Acquisition Data; World Bids Events Data.

540. Allowing for separate regional overcharges (Table 23, Regression 2), Varsity's real prices are elevated relative to the competitive benchmark in all five regions. Estimates of regional overcharges range from 9.9% in the West to 34.3% in the Northeast, with intermediate values equal to 23.4% in the Midwest, 30.2% in the Southeast, and 28.7% in the Southwest (see Table 24 above). The coefficients upon which these are based are statistically significant at the 99.9% confidence level for Northeast, Midwest, Southeast, and Southwest regions (see Table 24 above). The regional overcharge for the West region is positive, but not statistically significant at conventional confidence levels (see Table 24 above). This means that the estimate for the West region is imprecisely estimated, and the true value may be higher or lower than this estimate.

541. The uniform national level overcharge is estimated to be 27.4%, and the coefficient upon which this is based is statistically significant at the 99.9% confidence level (see Table 24

above).

542. The value of the overcharge can be derived from the estimated coefficient for the regional indicator variable by applying the formula overcharge percentage = (exp(coefficient) – 1) / exp(coefficient).[588]

543. As illustrated in Table 24 above, the estimated overcharge for the Northeast region is higher than the estimated national overcharge and the estimated overcharge for the West region is lower than the estimated national overcharge. I implement a standard statistical test, called an "F-test" to assess whether the three regional overcharges for the Midwest, Southeast, and Southwest regions are statistically different from each other. This test rejects the null hypothesis that the coefficient values are equal (with a p-value of 24%, which is larger than the conventional p-values threshold of 10% beyond which economists fail to reject the null hypothesis). This statistical test shows that there is insufficient statistical evidence to conclude that the three regional overcharges are different. Hence, they are indistinguishable (statistically).

544. The overcharge analysis thus far, using the results from the primary regression as reported in Table 23 above, provides compelling evidence for statistically significant (and economically substantial) price overcharges for Varsity events in four of the five geographic regions (all regions except the West region), and statistically indistinguishable regional overcharges for the Midwest, Southeast, and Southwest regions. To fully evaluate the price overcharges in the Northeast and West regions (recall the Northeast overcharge was higher than the national overcharge and the West overcharge was smaller than the national overcharge), a supplemental regression is required.

V.D.1.c(ii) SUPPLEMENTAL REGRESSION WITH COST CONTROLS

545. This supplemental regression includes cost controls, which are standard explanatory variables that economists include in multiple linear regression models to control for changes in cost over time. Specifically, if real price increases occur alongside real cost increases, then the observed real price increases may be explainable, statistically, by increases in real cost. Conversely, if real price increases occur alongside real cost decreases, then the observed real

[588] The percentage change in price relative to the competitive benchmark (but-for prices) equals exp(coefficient) – 1. The percentage change in price relative to the actual (elevated) prices equals (exp(coefficient) – 1) / exp(coefficient).

price increases are larger than initially estimated since the trajectory of real costs would otherwise predict a decrease in real prices (in the absence of anticompetitive conduct).

546. I include log cost per athlete as an additional explanatory variable in the supplemental regression, where the cost per athlete is adjusted for inflation using the same inflation adjustment as for prices (to obtain real cost per athlete). Data on cost per event is available for only about half of Varsity events and is available for only four acquired brands (Aloha, CSG, EPIC, and Spirit Celebration) in the competitive benchmark. With limited cost data, the supplemental regression lacks the statistical power of my primary regression (as reported in Table 23 above), which means that the overcharge estimates are less precisely estimated. The regression output for the supplemental regression with cost controls is reported in Table 25 below.

Table 25. Regression Output for Overcharge Model with Cost Controls

Dependent Variable: Log Real Price				
	(1)	(2)	(3)	(4)
VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Log Real Cost per Athlete	0.513***	0.513***	0.508***	0.508***
	(0.015)	(0.047)	(0.015)	(0.047)
Postseason Flag in MW	0.423	0.423*	0.456**	0.456**
	(0.259)	(0.254)	(0.224)	(0.209)
World Bids Event Flag in MW	0.392***	0.392***	0.399***	0.399***
	(0.044)	(0.026)	(0.044)	(0.026)
Postseason Flag in NE	-0.280**	-0.280***	-0.074	-0.074
	(0.125)	(0.085)	(0.116)	(0.082)
World Bids Event Flag in NE	0.283***	0.283***	0.277***	0.277***
	(0.035)	(0.033)	(0.035)	(0.034)
Postseason Flag in SE	0.843***	0.843***	0.856***	0.856***
	(0.042)	(0.176)	(0.042)	(0.176)
World Bids Event Flag in SE	0.139***	0.139***	0.142***	0.142***
	(0.022)	(0.038)	(0.022)	(0.038)
Postseason Flag in SW	-0.379**	-0.379***	-0.374**	-0.374***
	(0.162)	(0.089)	(0.163)	(0.089)
World Bids Event Flag in SW	0.349***	0.349***	0.355***	0.355***
	(0.028)	(0.062)	(0.028)	(0.061)
Postseason Flag in W	-0.270*	-0.270***	-0.270*	-0.270***
	(0.157)	(0.041)	(0.158)	(0.041)
World Bids Event Flag in W	0.090***	0.090**	0.092***	0.092**
	(0.033)	(0.044)	(0.033)	(0.044)
Overcharge Flag in MW	0.310***	0.310***		
	(0.069)	(0.100)		
Overcharge Flag in NE	0.046	0.046		
	(0.062)	(0.051)		
Overcharge Flag in SE	0.323***	0.323***		
	(0.113)	(0.044)		
Overcharge Flag in SW	0.416***	0.416***		

	(0.069)	(0.085)		
Overcharge Flag in W	0.603***	0.603***		
	(0.222)	(0.123)		
Overcharge Flag			0.260***	0.260***
			(0.036)	(0.045)
Constant	2.083***	2.083***	2.159***	2.159***
	(0.086)	(0.202)	(0.073)	(0.201)
Observations	1,365	1,365	1,365	1,365
R-squared	0.896	0.896	0.895	0.895
Weighted by Athlete Count	Yes	Yes	Yes	Yes
Region Dummies	Yes	Yes	Yes	Yes
Event Dummies	Yes	Yes	Yes	Yes
Controls for Cost	No	No	No	No
Robust Standard Errors	No	Yes	No	Yes

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Sources: Varsity Registrations Data; Pre-Acquisition Data; World Bids Events Data.

547. The regression with cost controls identifies positive and economically substantial overcharge coefficients for Varsity events in four of the five geographic regions (Table 25, Regressions 1 and 2), including the West region in which the coefficient estimate corresponds to an overcharge of 45.3%, the highest overcharge among the five regions (see Table 26 below). With robust standard errors (Table 25, Regression 2), the overcharges for the Midwest, Southeast, Southwest, and West regions are statistically significant at the 99% confidence level. The regional overcharge for the Northeast region is positive, but not statistically significant at conventional confidence levels (Table 25, Regression 2). This means that the estimate for the Northeast region is imprecisely estimated, and the true value may be higher or lower than this estimate. Further, for robust standard errors (Table 25, Regression 4), the national overcharge coefficient is positive, statistically significant at the 99% confidence level, and economically substantial as it corresponds to a 22.9% overcharge (see Table 26 below).

548. Table 26 below reports the overcharge estimates and the results of the statistical tests for the regressions with robust standard errors (Table 25, Regressions 2 and 4).

Table 26. Price Overcharge for Varsity Cheer Competitions: Overcharge Model with Cost Controls

Region	Overcharge	Robust Standard Error	t-statistic	P-value	95% Confidence Interval, Lower Bound	95% Confidence Interval, Upper Bound
MW	26.7%	0.100	3.09	0.002	10.7%	39.8%
NE	4.5%	0.051	0.91	0.364	-5.5%	13.6%
SE	27.6%	0.044	7.29	0.000	21.0%	33.6%
SW	34.0%	0.085	4.90	0.000	22.1%	44.2%
W	45.3%	0.123	4.93	0.000	30.4%	57.0%
F-Test	H0: Overcharge_MW = Overcharge_SE = Overcharge_SW = Overcharge_W					
	F(3, 1205) = 1.78					
	Prob > F = 0.149					
ALL REGIONS	22.9%	0.045	5.81	0.000	15.8%	29.3%

Sources: Varsity Registrations Data; Pre-Acquisition Data; World Bids Events Data.

549. Allowing for separate regional overcharges (Table 25, Regression 2), Varsity's price is elevated in all five geographic regions, compared to the competitive benchmark. Individual estimates of regional overcharges in the model with cost controls range from 4.5% in the Northeast to 45.3% in the West. The coefficients are statistically significant at the 99.9% confidence level for the Southeast, Southwest, and West regions and are statistically significant at the 99.8% confidence level for the Midwest region (see Table 26). Due to the loss of statistical power, the overcharge coefficient estimate is positive, but not statistically significant at any standard confidence levels, for the Northeast region (p-value equals 36.4%, see Table 26). This means that the estimate for the Northeast region is imprecisely estimated, and the true value may be higher or lower than this estimate.

550. The uniform national level overcharge is estimated to be 22.9%, and the coefficient upon which this is based is statistically significant at the 99.9% confidence level (see Table 26).

551. As illustrated in Table 26 above, the estimated overcharge for the Northeast region is lower than the estimated national overcharge. I implement a standard statistical test, called an "F-test" to assess whether the four regional overcharges for the Midwest, Southeast, Southwest, and West regions are statistically different from each other. This test rejects the null hypothesis that the coefficient values are equal (with a p-value of 14.9%, which is significantly larger than the conventional p-values threshold of 10% beyond which economists fail to reject the null hypothesis).

V.D.1.c(iii) Statistically Common Impact Across Regions

552. In the primary regression, the regional overcharges are statistically indistinguishable from each other for the Midwest, Southeast, and Southwest regions (with the Northeast region having a statistically larger overcharge and the West region having a statistically smaller overcharge). The Northeast region overcharge is, in isolation, the largest overcharge estimate, and it is statistically significant. The West region has a statistically lower estimated overcharge, and that estimate is not itself statistically significant. In the supplemental regression with cost controls, the regional overcharges are statistically indistinguishable for the Midwest, Southeast, Southwest, and West regions (and the Northeast region has a statistically smaller overcharge).

553. My preferred regression specification already incorporates event specific fixed effects, which act as controls for both costs and other local conditions that may vary by event. My preference, if given complete information, would be a regression that includes both fixed effects and explicit cost controls. However, the data produced in this investigation only includes cost information for about half of Varsity's competitions and only about half of the acquired event producers' competitions. A regression with cost control identifies the statistical effects over the subsample of data for which cost information is available. This subsample of data is not randomly generated, but specific to the reasons that Varsity maintained and produced incomplete registration records, including registration records from the event producers that it acquired. This non-random component and the smaller sample size, which generates a loss of statistical power and concerns about unknown bias related to which events have cost data, along with fact that cost controls in the form of event fixed effects are included in both regressions, are the basis for my determination that the primary regression specification is the one that does not include cost control (full data sample) and that the supplemental regression specification does include cost controls (non-randomly generated subsample of data). Both are considered in my opinion that the appropriate overcharge estimate for all regions is the estimate of a common national overcharge. For that common national estimate, the primary and supplemental specification yield statistically indistinguishable results (the common national estimate from the primary regression lies within the 95% confidence interval around the common national estimate from the supplemental regression. Further, the separate regional estimates for the Midwest, Southeast,

and Southwest regions (previously analyzed jointly using an F-test) are statistically indistinguishable from the common national estimate in the primary regression (the common national estimate lies within the 95% confidence intervals for all three regional estimates); and the separate regional estimates for the Midwest, Southeast, and Southwest regions are statistically indistinguishable from the common national estimate in the supplemental regression (the common national estimate lies within the 95% confidence intervals for all three regional estimates).

554. Nonetheless, the incorporation of cost controls provides important information about the main economic factors that correlate with competition prices. In particular, in the West region, the estimated overcharges in the primary regression without cost controls are small (smallest of the five regions) and not statistically significant. Yet, as demonstrated by the supplemental regression with cost controls, the estimated percentage overcharge in the West is statistically significant, and statistically indistinguishable from the estimates of all regions except the Northeast.

555. In the regression with cost controls, the estimated overcharge for the West region is the largest of all regions and is statistically significant at the 99.9% confidence level. This gives me assurance that the West region overcharge is not a statistical outlier but would be properly estimated to be statistically indistinguishable from the overcharges of the other regions once appropriate cost controls are included in the regression.

556. Cost controls, which Dr. Murphy prepared for analysis but ultimately decided against including in any of his regression specifications, are important controls to use when estimating overcharges using the dummy variable methodology. Demand controls, as implemented by Dr. Murphy, can be important controls if used correctly. The statistical value of demand controls is limited under a fixed effects methodology, as I have employed in my regressions in which event-specific dummy variables are included to control for event-specific factors that affect real price. The event-specific factors capture event-specific demand factors and thus the inclusion of additional demand controls has limited statistical value.

557. Thus, the results of both regressions provide the statistical evidence showing that it is not possible to conclude, based on the statistical evidence, that any of the regional overcharges differ from any of the other regional overcharges. The statistical evidence does not support

using separate regional overcharges instead of the national estimate. The national overcharge estimate is more precisely estimated, reliable and appropriate, especially in light of the evidence of national level conduct and the high and nearly ubiquitous Varsity market shares. As mentioned above, the national overcharge estimate equals 27.4% in the primary regression and 22.9% in the supplemental regression, and the statistical significance level of the coefficient for the national overcharge coefficient equals 99.9% in both the primary regression and the supplemental regression with cost controls.

V.D.1.c(iv) DEMAND CONTROLS

558. Dr. Murphy writes, "Dr. Heeb also failed to incorporate demand controls into his regression analysis. The lack of demand controls can cause omitted variable bias" and then proceeds to describe the new explanatory variable that he incorporates in his regressions ("a relevant variable that measures interest in cheer" based on data from "public sources that measure national participation in high school competitive cheer over time").[589]

559. Importantly, my supplemental regression includes cost controls. Dr. Murphy's regressions suffer from omitted variable bias as they do not include cost controls. Cost controls are used in regressions by economists to control for unobserved supply factors that could influence prices. Cost controls are typically the first type of controls that economists apply in price regressions as the effects of cost on price are unambiguous (i.e., if costs go up, then prices may go up but wouldn't go down) and only materialize through the supply channel. Demand controls, by contrast, have ambiguous effects on price as observed demand is an equilibrium outcome determined by relevant supply and demand factors (i.e., observed demand could go up because customers preferences for that product increase or because firms' ability to supply that product increase, or just because population grew). Dr. Murphy provides no compelling reason why he does not include cost controls in any of his regressions.[590]

560. If demand controls are included in the regression, they must be implemented in a manner

[589] Murphy Report, ¶ 409 (internal citations omitted).

[590] Murphy Deposition, November 4, 2022, 227:17-228:25 ("Q. Why didn't you use specific measures of cost? A. They were not very consistent over time in terms of how they were done. ... I don't remember whether they were available all the time. I know when we looked at the time periods that we had and the measures that we had, and we talked to Mr. Landon about it, he kind of informed us of some of the various changes to the way things are done that happened over time, which kind of pushed us away from using a specific cost measure."). The problem was not with Varsity's data collection, but with its data production. Dr. Murphy could ask his client for additional data if the produced data was not to his liking.

consistent with the facts and evidence of the investigation. Dr. Murphy generates a demand control variable that exhibits significant year-to-year growth in cheer participation. However, this variable is inconsistent with the facts of the investigation:

- Total participation at acquired brand events decreased by 42% following Varsity acquisition, mostly due to Varsity's decision to discontinue 30% the events it acquired (see Table 14 and Table 18).
- Total participation at Varsity's legacy events decreased by 2.1% from 2014-2015 to the 2018-2019.
- Dr. Murphy presents no evidence of significant growth in total participation at rival event producers' competitions that are still independent from Varsity.

561. Therefore, the inclusion of a demand control variable may be appropriate, statistically, but that variable needs to demonstrate a decreasing trend over time. Dr. Murphy's demand control variable demonstrates a significantly increasing trend over time and is thus inappropriate to use as a demand control.

562. Dr. Murphy's "demand variable" is an index constructed from NFHS High School Participation Survey data. As previously described, Varsity Spirit's corporate sponsorship of NFHS, the organization collecting the data, renders that data biased and unreliable. Further, as shown above, the survey data was not reliably collected as it violates Benford's Law (see Table 20).

563. Beyond the unreliability of the data source, Dr. Murphy's inclusion of the "relevant variable that measures interest in cheer" is flawed for several reasons.[591] First, Dr. Murphy copies the data incorrectly from the raw source documents into Excel. Second, Dr. Murphy calculates his "participation index" incorrectly. Third, and most importantly, his "participation index" is a time series variable that increases over time, which is inconsistent with the evidence that I previously presented showing that total participation at acquired brand events decreases (see Table 18) and that total participation at Varsity's legacy and CL events decreased over time (see Table 19).

564. First, Dr. Murphy copied the data manually from the raw source documents to Excel. This was unusual since the data was available to download from the NFHS website in machine-

[591] Murphy Report, ¶ 409.

readable format (Excel).[592] When copying the data manually, Dr. Murphy attributed 20 boys in the 2016-2017 season to New Jersey, when the data indicates those 20 boys were from New Hampshire. Similarly, Dr. Murphy attributed 175 boys to New York in that same season, when those 175 boys were from New Mexico.[593] Table 61 displays the table from Dr. Murphy's backup materials with the manually copied data, including a dark box around the data entries containing a manual entry error.

565. Second, Dr. Murphy creates his participation index using an unreliable methodology. To illustrate how he creates his participation index, considering the application of the "chaining" method that limits the comparison set to the 2010-2011 and 2011-2012 seasons. If some states were part of the survey in 2011-2012, but not in 2010-2011, then it would be inaccurate to report changes in total participation over all states as there is not a common basis for comparison on both seasons. Thus, the "chaining" method applied to the 2010-2011 and 2011-2012 seasons only considers the states with participation information in both of those seasons. Once the "chained" states are identified, the appropriate way to calculate the index is to calculate the total participation in the 2011-2012 season among those "chained" states relative to the total participation in the 2010-2011 season among those same "chained" states. Dr. Murphy's index is not constructed using this methodology. Instead, he calculates the percentage change in participation for each "chained" state and then takes the mean of the percentage changes across all "chained" states.

566. For example, in the comparison of the 2010-2011 and 2011-2012 seasons, Dr. Murphy's incorrect index approach finds that the mean of the participation changes across the "chained" states equaled 13.6%. However, the total participation across the "chained" states in 2011-2012 was 2.2% ***lower*** than the total participation across those same "chained" states in 2010-2011. Dr. Murphy identifies a 13.6% participation increase, when in fact participation ***decreased*** by 2.2%. By using the mean approach, Dr. Murphy benefits from the inclusion of the participation change for the state of Arkansas, which saw a 497% price increase from the 2010-2011 season to the 2011-2012 season (from 231 to 1,379 participants). These data points for Arkansas appear to contain at least one flawed data entry

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[592] NFHS, "Participation Statistics," accessed Nov. 4, 2022, available at: https://members.nfhs.org/participation_statistics
[593] Ibid.

(or at least one flawed survey response). But rather than ignoring this flawed set of data points, Dr. Murphy's indexing method amplifies and promotes these extreme outliers. Dr. Murphy's approach to "assign the more populous states more prominence by weighting each state's growth by its population of high school-aged females" does not resolve the Arkansas problem.[594] Weighting by the state population of high school-aged females does not correct for the fact that the survey relied upon by Dr. Murphy reports only 231 participants in 2010-2011 and 1,379 participants in 2011-2012 for the state of Arkansas.

567. The proper way to apply the indexing method is **not** to apply weights from a different data source (as Dr. Murphy has done), but to consistently use the same data source and calculate the Fisher ideal index.[595] The Fisher ideal index is the geometric mean of the Laspeyres and the Paasche indexes.[596] The Laspeyres index determines weights for each state based on the participation in that state in 2010-2011.[597] The Paasche index determines weights for each state based on the participation in that state in 2011-2012.[598] Thus, the Fisher ideal index uses information from both the "before" season (2010-2011) and the "after" season (2011-2012) when setting the weights for each state.

568. The Fisher ideal index is the preferred methodology for professional economists as it is the most reliable and has the best statistical properties.[599] Professional economists use the Fisher ideal index methodology approach for applications such as the Bureau of Economic Analysis quarterly reports of real GDP (using "chain weighting") and the GDP deflator and other price indices derived from the "chain-weighted" real GDP data.[600]

569. Even using Dr. Murphy's flawed indexing methodology, his econometric results in a supplemental specification that includes his "demand control" explanatory variable are

[594] Murphy Report, Appendix D, ¶ 3.
[595] Bureau of Economic Analysis, NIPA Handbook, Chapter 4: Estimating Methods, May 2019, accessed Dec. 14, 2022, available at: https://www.bea.gov/resources/methodologies/nipa-handbook/pdf/chapter-04.pdf; see also J. Steven Landefeld and Robert P. Parker, "Preview of the Comprehensive Revision of the National Income and Product Accounts: BEA's New Featured Measures of Output and Prices," Survey of Current Business, July 1995, 31-38, accessed Dec. 14, 2022, available at: https://apps.bea.gov/scb/pdf/national/nipa/1995/0795od.pdf; J. Steven Landefeld, Brent R. Moulton, and Cindy M. Vojtech, "Chained-Dollar Indexes: Issues, Tips on Their Use, and Upcoming Changes," Survey of Current Business, November 2003, accessed Dec. 14, 2022, available at: https://apps.bea.gov/scb/pdf/2003/11November/1103%20Chain-dollar.pdf.
[596] Ibid.
[597] Ibid.
[598] Ibid.
[599] Ibid.
[600] Ibid.

incorrect. First, I replicate Dr. Murphy's regression specification in which price is defined by deducting rebates. The results are reported in Table 27 below.

Table 27. Regression Output for Dr. Murphy's Overcharge Model with Rebates Deducted from Price

Dependent Variable: Log Real Price				
VARIABLES	(1) Regression 1	(2) Regression 2	(3) Regression 3	(4) Regression 4
Postseason Flag in MW	0.961***	0.961	1.014***	1.014
	(0.188)	(0.713)	(0.183)	(0.713)
World Bids Event Flag in MW	0.464***	0.464***	0.451***	0.451***
	(0.061)	(0.053)	(0.060)	(0.054)
School Flag in MW	-0.871***	-0.871***	-0.880***	-0.880***
	(0.071)	(0.071)	(0.071)	(0.071)
Postseason Flag in NE	-0.003	-0.003	-0.072	-0.072
	(0.084)	(0.077)	(0.078)	(0.076)
World Bids Event Flag in NE	0.482***	0.482***	0.498***	0.498***
	(0.050)	(0.037)	(0.050)	(0.037)
School Flag in NE	-0.960***	-0.960***	-0.944***	-0.944***
	(0.106)	(0.106)	(0.105)	(0.105)
Postseason Flag in SE	2.034***	2.034***	2.036***	2.036***
	(0.038)	(0.164)	(0.038)	(0.164)
World Bids Event Flag in SE	0.442***	0.442***	0.444***	0.444***
	(0.029)	(0.055)	(0.029)	(0.054)
School Flag in SE	-0.710***	-0.710***	-0.708***	-0.708***
	(0.059)	(0.060)	(0.059)	(0.060)
Postseason Flag in SW	0.004	0.004	0.006	0.006
	(0.245)	(0.095)	(0.245)	(0.095)
World Bids Event Flag in SW	0.614***	0.614***	0.616***	0.616***
	(0.037)	(0.057)	(0.037)	(0.056)
School Flag in SW	-0.801***	-0.801***	-0.799***	-0.799***
	(0.060)	(0.069)	(0.060)	(0.068)
Postseason Flag in W	0.044	0.044	0.084	0.084
	(0.206)	(0.099)	(0.205)	(0.063)
World Bids Event Flag in W	0.554***	0.554***	0.548***	0.548***
	(0.045)	(0.049)	(0.045)	(0.049)
School Flag in W	-1.212***	-1.212***	-1.222***	-1.222***
	(0.040)	(0.061)	(0.040)	(0.060)
Overcharge Flag in MW	0.146***	0.146***		
	(0.042)	(0.030)		
Overcharge Flag in NE	0.275***	0.275***		
	(0.046)	(0.030)		
Overcharge Flag in SE	0.222***	0.222***		
	(0.058)	(0.055)		
Overcharge Flag in SW	0.228***	0.228***		
	(0.077)	(0.054)		
Overcharge Flag in W	-0.017	-0.017		
	(0.084)	(0.068)		
Overcharge Flag			0.191***	0.191***
			(0.025)	(0.020)
Constant	4.016***	4.016***	4.052***	4.052***
	(0.077)	(0.054)	(0.033)	(0.036)

Observations	2,613	2,613	2,613	2,613
R-squared	0.757	0.757	0.756	0.756
Weighted by Athlete Count	Yes	Yes	Yes	Yes
Region Dummies	Yes	Yes	Yes	Yes
Event Dummies	Yes	Yes	Yes	Yes
Controls for Cost	No	No	No	No
Robust Standard Errors	No	Yes	No	Yes

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Sources: Varsity Registrations Data; Pre-Acquisition Data; World Bids Events Data.

570. The overcharge estimates from my replication of Dr. Murphy's supplemental regression with rebates deducted from price are nearly identical to Dr. Murphy's Exhibit 58.[601] Dr. Murphy's calculated overcharge for his supplemental specification "Subtracting Rebates from New Fees; Removing Erroneous Discounts; Registration Fees Adjusted for Inflation; Robust Standard Errors" equals 16.3%.[602] Table 28 below reports the national overcharge from my replication of Dr. Murphy's supplemental regression equal to 17.4%. The regional overcharges are jointly statistically significant at the 99.9% confidence level according to an F-test that rejects the null hypothesis that the regional overcharges equal 0 and the national overcharge is statistically significant at the 99.9% confidence level (see Table 28 below).

Table 28. Price Overcharge for Dr. Murphy's Overcharge Model with Rebates Deducted from Price

Region	Overcharge	Robust Standard Error	t-statistic	P-value	95% Confidence Interval, Lower Bound	95% Confidence Interval, Upper Bound
MW	13.6%	0.030	4.92	0.000	8.4%	18.5%
NE	24.0%	0.030	9.03	0.000	19.4%	28.4%
SE	19.9%	0.055	4.04	0.000	10.8%	28.0%
SW	20.4%	0.054	4.27	0.000	11.6%	28.3%
W	-1.7%	0.068	-0.25	0.806	-16.3%	11.1%
F-Test	H0: Overcharge_MW = Overcharge_NE = Overcharge_SE = Overcharge_SW = Overcharge_W = 0					
	F(5, 2448) = 28.1					
	Prob > F = 0.000					
ALL REGIONS	17.4%	0.020	9.76	0.000	14.1%	20.5%

Sources: Varsity Registrations Data; Pre-Acquisition Data; World Bids Events Data.

601 Murphy Report, Exhibit 58.
602 Murphy Report, Exhibit 58.

571. However, Dr. Murphy's second supplemental regression specification in Exhibit 58 "Same Corrections and Controlling for Cheer Popularity" was implemented incorrectly and has inaccurate econometric results. This second supplemental regression specification, according to Dr. Murphy's description, only differs from his first supplemental regression with the inclusion of his "demand control" explanatory variable.[603]

572. Despite flaws in his indexing methodology used to generate the "demand control" explanatory variable, I nonetheless use his cheer popularity index variable (exactly as constructed by Dr. Murphy) as an additional explanatory variable in the price overcharge regression. The results of this regression with Dr. Murphy's cheer popularity index variable included as an additional explanatory variable are reported in Table 35 below.

Table 29. Regression Output for Dr. Murphy's Overcharge Model with Rebates Deducted from Price and Dr. Murphy's Cheer Popularity Index Included as an Additional Explanatory Variable

Dependent Variable: Log Real Price				
	(1)	(2)	(3)	(4)
VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
NFHS Survey Index	0.002***	0.002***	0.002***	0.002***
	(0.000)	(0.001)	(0.000)	(0.001)
Postseason Flag in MW	0.981***	0.981	1.041***	1.041
	(0.187)	(0.723)	(0.182)	(0.725)
World Bids Event Flag in MW	0.466***	0.466***	0.451***	0.451***
	(0.061)	(0.054)	(0.060)	(0.055)
School Flag in MW	-0.884***	-0.884***	-0.894***	-0.894***
	(0.071)	(0.073)	(0.071)	(0.072)
Postseason Flag in NE	0.046	0.046	-0.100	-0.100*
	(0.115)	(0.042)	(0.078)	(0.058)
World Bids Event Flag in NE	0.487***	0.487***	0.503***	0.503***
	(0.050)	(0.038)	(0.050)	(0.038)
School Flag in NE	-0.972***	-0.972***	-0.957***	-0.957***
	(0.105)	(0.104)	(0.105)	(0.104)
Postseason Flag in SE	1.998***	1.998***	2.000***	2.000***
	(0.038)	(0.164)	(0.038)	(0.164)
World Bids Event Flag in SE	0.439***	0.439***	0.441***	0.441***
	(0.029)	(0.055)	(0.029)	(0.054)
School Flag in SE	-0.731***	-0.731***	-0.729***	-0.729***
	(0.058)	(0.060)	(0.058)	(0.060)
Postseason Flag in SW	-0.052	-0.052	-0.050	-0.050
	(0.243)	(0.092)	(0.244)	(0.091)
World Bids Event Flag in SW	0.614***	0.614***	0.615***	0.615***
	(0.037)	(0.050)	(0.037)	(0.050)
School Flag in SW	-0.829***	-0.829***	-0.827***	-0.827***
	(0.060)	(0.073)	(0.060)	(0.073)
Postseason Flag in W	0.008	0.008	0.045	0.045

[603] Murphy Report, ¶ 409; Exhibit 58.

	(0.204)	(0.085)	(0.204)	(0.055)
World Bids Event Flag in W	0.554***	0.554***	0.549***	0.549***
	(0.044)	(0.048)	(0.045)	(0.047)
School Flag in W	-1.222***	-1.222***	-1.231***	-1.231***
	(0.039)	(0.060)	(0.039)	(0.060)
Overcharge Flag in MW	0.096**	0.096***		
	(0.042)	(0.035)		
Overcharge Flag in NE	0.229***	0.229***		
	(0.047)	(0.034)		
Overcharge Flag in SE	0.183***	0.183***		
	(0.058)	(0.057)		
Overcharge Flag in SW	0.179**	0.179***		
	(0.077)	(0.057)		
Overcharge Flag in W	-0.050	-0.050		
	(0.083)	(0.070)		
Overcharge Flag			0.145***	0.145***
			(0.026)	(0.025)
Constant	3.534***	3.534***	3.564***	3.564***
	(0.114)	(0.151)	(0.092)	(0.146)
Observations	2,613	2,613	2,613	2,613
R-squared	0.760	0.760	0.759	0.759
Weighted by Athlete Count	Yes	Yes	Yes	Yes
Region Dummies	Yes	Yes	Yes	Yes
Event Dummies	Yes	Yes	Yes	Yes
Controls for Cost	No	No	No	No
Robust Standard Errors	No	Yes	No	Yes

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Sources: Varsity Registrations Data; Pre-Acquisition Data; World Bids Events Data; NFHS High School Participation Survey.

573. The overcharge estimates that correspond to the regression output from Table 29 above for the specifications with robust standard errors (Regression 2 and Regression 4) are further detailed in Table 30 below.

Table 30. Price Overcharge for Dr. Murphy's Overcharge Model with Rebates Deducted from Price and Dr. Murphy's Cheer Popularity Index Included as an Additional Explanatory Variable

Region	Overcharge	Robust Standard Error	t-statistic	P-value	95% Confidence Interval, Lower Bound	95% Confidence Interval, Upper Bound
MW	9.1%	0.035	2.71	0.007	2.6%	15.2%
NE	20.4%	0.034	6.75	0.000	15.0%	25.6%
SE	16.7%	0.057	3.18	0.001	6.8%	25.6%
SW	16.4%	0.057	3.11	0.002	6.4%	25.3%
W	-5.2%	0.070	-0.72	0.472	-20.7%	8.3%
F-Test	H0: Overcharge_MW = Overcharge_NE = Overcharge_SE = Overcharge_SW = Overcharge_W = 0					
	F(5, 2447) = 12.02					
	Prob > F = 0.000					
ALL REGIONS	13.5%	0.025	5.83	0.000	9.1%	17.6%

Sources: Varsity Registrations Data; Pre-Acquisition Data; World Bids Events Data.

574. As evidenced in Table 29 above (Regression 2) and Table 30 above, the regional overcharges when including the additional explanatory variable are positive and statistically significant at 99% confidence levels for the Midwest, Northeast, Southeast, and Southwest regions. Further, the regional overcharges are jointly statistically significant at the 99.9% confidence level according to an F-test that rejects the null hypothesis that the regional overcharges equal 0 (p-value equals 0.000; see Table 30). As evidenced in Table 29 above (Regression 4) and Table 30 above, the national overcharge when including the additional explanatory variable equals 13.5%, which is statistically significant at the 99.9% confidence level, positive, and of substantial economic value to demonstrate anticompetitive effects. Dr. Murphy's claim that "the estimated national overcharge becomes negative and insignificant" "[o]nce I incorporate this demand variable" is incorrect.[604] The estimated national overcharge is still positive and statistically significant at the 99.9% confidence level (p-value equals 0.000; see Table 30).

575. I do not agree that this particularly demand control should be included in any empirical analysis for three reasons. First, the data was unreliably collected, and Dr. Murphy provides no information on the survey methodology. A basic statistical test imply that the survey data violated Benford's Law (see Table 20), suggesting it was not generated by observations of

[604] Murphy Report, ¶ 409.

naturally occurring data. Dr. Murphy creates an index from the raw survey data that appears to be unreliable and inconsistent with standard practice by economic professionals. Second, Varsity provided substantial financing to the collection agency (millions of dollars over 20 years) such that the reliability and independence of the data is in doubt. Third, and most importantly, this variable, which purports to be representative of the growth of cheer, is simply an upward trend variable. When included in the model, the effects of the overcharge based on changes from benchmark prices will be partially confounded with the upward trend in the growth, so the overcharge variables can no longer be correctly interpreted as such.[605] Only a direct measure of the impacts of this demand change on the pricing economics, such as the cost variable that I used, can serve the purpose for which Dr. Murphy includes it.

576. Yet, despite these significant flaws, inclusion of this cheer popularity index has minimal quantitative effect on the overcharge analysis results. Comparing Table 28 and Table 30, the national overcharge decreases from 17.4% (positive and statistically significant at the 99.9% confidence level) to 13.5% (positive and statistically significant at the 99.9% confidence level). If anything, this exercise reinforces my conclusion that there are significant anticompetitive price effects regardless of empirical specification. This offers further evidence that anticompetitive price effects are a feature of the data, not of the economic model.

V.D.2. My camp overcharge analysis is based on well-established economic principles and facts

577. I have based my analysis of monopoly overcharges for cheer camps on a comparison with econometrically estimated overcharges for cheer competitions because there are no data available in discovery to empirically determine the benchmark for competitive pricing of camps. Dr. Murphy contradicts this statement with the observation that Varsity's camp registration data has the "same detail" as the competition data. That observation neglects the fact that the competition data included detailed pricing data related to competitive events of acquired firms, including data related to pre-acquisition pricing. These data establish a reliable competitive benchmark for comparison with Varsity's own competition prices, as well as the elevated prices that Varsity imposed when it took over and raised the prices of

605 See the discussion starting at ¶ 521.

those acquired brand events. Varsity's data related to camps does not include any competitor data or other competitive benchmarks. Presumably, if Dr. Murphy had identified competitive benchmark data in Varsity's production, he would have utilized that data to substantiate his claims regarding Varsity's overcharges related to camps. He did no such analysis.

V.D.3. My apparel overcharge analysis is based on a properly identified competitive benchmark

578. I update the analysis from my first report by carefully cleaning the Varsity apparel sales data to remove any customers with a "ship to" address or a "bill to" address outside of the United States and to remove any customers that are not All-Star or school competitive cheer customers. With these updates, the estimated overcharge values increase slightly, as shown below.

579. The methodology for the apparel overcharge analysis is identical to my first report. I identify Nfinity, a cheer apparel company, as a competitive benchmark for prices in the cheer apparel market and compare the prices of Varsity cheer competition shoes to the prices of Nfinity cheer competition shoes. Specifically, I calculate the average net price for every model of Nfinity brand shoe and every model of Varsity brand shoe sold each year from 2016-2019 (the non-COVID years of the Class Period).[606] For each year, I sort the average net prices from lowest to highest and then calculate the following percentiles (weighted by the number of shoes sold): 5th percentile, 15th percentile, 25th percentile, 35th percentile, 45th percentile, 55th percentile, 65th percentile, 75th percentile, 85th percentile, and 95th percentile. I compare the price of the Varsity brand shoe at the 5th percentile in 2015 to the Nfinity brand shoe at the 5th percentile in 2015, and similarly for all other percentiles and all other years (2016-2019). I find the geometric mean of the relative price (Varsity relative to Nfinity) for each year to calculate the Varsity overcharge from 2016-2019.

580. The results of my analysis are reported in Table 31 below. The overcharge averaged over 2017-2019 equals 11.0%. My overcharge estimate of 11.0% is conservative as the overcharge was significantly higher in 2016.

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[606] Nfinity branded shoes include the following models: Evolution, Phoenix, Game Day, Vengeance, Defiance, Titan, Rival, Flyte, and Beast Mid Top. Varsity branded shoes include over 30 models, including: Aeros, Ascend, Glitterazzi, V4X, Last Pass, V4S, Apex, and Dbl Edge. See Varsity Apparel Data; NFINITY000297 (DESIGNATED HIGHLY CONFIDENTIAL – EXPERT AND ATTORNEYS' EYES ONLY).

Table 31. Varsity Overcharge on Cheer Apparel (TABLE DESIGNATED HIGHLY CONFIDENTIAL – EXPERT AND ATTORNEYS' EYES ONLY)

Year	Nfinity Weighted Distribution (5th, 15th, …, 95th Percentiles)	Varsity Weighted Distribution (5th, 15th, …, 95th Percentiles)	Overcharge
2016	($34.73, $39.07, $46.75, $46.75, $46.75, $51.85, $51.85, $51.85, $51.85, $71.43)	($44.02, $52.95, $52.95, $52.95, $71.02, $77.83, $80.98, $80.98, $81.29, $87.69)	27.1%
2017	($42.37, $42.37, $53.76, $53.76, $53.76, $61.26, $61.26, $61.26, $71.92, $82.76)	($40.70, $45.49, $50.90, $50.90, $72.26, $79.39, $79.39, $79.39, $81.64, $84.98)	10.8%
2018	($41.70, $41.70, $54.79, $54.79, $59.39, $59.39, $59.39, $59.39, $79.22, $81.68)	($38.47, $48.81, $48.81, $62.32, $68.33, $72.47, $79.67, $84.62, $88.02, $94.82)	12.5%
2019	($44.59, $56.73, $56.73, $56.73, $66.22, $66.22, $66.22, $66.22, $78.65, $78.65)	($40.37, $49.68, $49.68, $59.91, $70.26, $87.54, $90.41, $90.41, $90.41, $97.43)	9.6%

Sources: Varsity Apparel Data; NFINITY000297 (DESIGNATED HIGHLY CONFIDENTIAL – EXPERT AND ATTORNEYS' EYES ONLY).[607]

581. Dr. Murphy writes, "Dr. Heeb's *ad hoc* approach to calculating an 'overcharge' for apparel lacks any economic foundation and his result is unreliable and uninformative. There are several severe flaws that render Dr. Heeb's calculation fundamentally unsound."[608]

582. Dr. Murphy does not analyze any data and does not perform any quantitative analysis in forming his opinions about apparel price overcharge. My opinions on that issue are based on a reliable methodology and data produced in this litigation by Varsity and a rival apparel company (Nfinity).[609] My approach is not *ad hoc.* It is an empirical analysis that statistically compares the prices of Varsity cheer competition shoes to Nfinity cheer competition shoes. Nfinity is a cheer apparel company that specializes in shoes. Based on my analysis of the relative quality of the two shoe brands, I determine that Nfinity cheer competition shoes are higher quality shoes than Varsity cheer competition shoes.[610] I further determine that Nfinity did not and does not have market power in this market. Therefore, the competitive benchmark for my empirical price comparison includes Nfinity cheer competition shoes. The overcharge for Varsity cheer competition shoes, relative to the competitive benchmark, equals 11.0%

[607] Note: All content citing to or relating to the production made by Nfinity Athletic LLC, shall be designated as "Highly Confidential – Attorneys and Expert Eyes Only" pursuant to Order Granting Joint Motion for Entry of Stipulated Protective Order in Fusion Elite All Stars, et al. v. Nfinity Athletic LLC, Case 2:22-cv-02226-SHL-tmp, ECF No. 30, (W.D. Tenn.), filed May 31, 2022 ("Nfinity PO").
[608] Murphy Report, ¶ 412 (internal citations omitted).
[609] Heeb Report, ¶¶ 300-307.
[610] TheCheerBuzz, "Guide: The Top 7 Best Cheerleading Shoes (Ranked by Actual Athletes)," June 8, 2021, accessed June 7, 2022, available at: https://www.thecheerbuzz.com/guide-the-top-7-best-cheerleading-shoesranked-by-actual-athletes/; YouTube, "Nfinity Vengeance VS Varsity Last Pass," accessed June 9, 2022, available at: https://www.youtube.com/watch?v=L6cLgSJDR6A.

(see Table 31 above). Since Nfinity has a higher quality shoe than Varsity, this overcharge estimate is an **understatement** of the total price difference between the two companies.

583. The price comparison using shoes is reliable and appropriate for estimating the apparel overcharge in the broader market.[611] I used all available data for rival apparel company pricing in defining the competitive benchmark.

584. Dr. Murphy writes, "his [Heeb] overcharge estimate is not valid even for shoes because it ignores any differences in assortment between Varsity and Nfinity that affect sales prices at each percentile in the comparison. … If there are any differences in assortment or branding that make Varsity shoes and Nfinity shoes each relatively more attractive to different consumer segments, then these differences can create an 'overcharge' using Dr. Heeb's approach where no overcharge actually exists."[612]

585. Dr. Murphy does not analyze any data and does not perform any quantitative analysis in forming his opinions about apparel overcharge. It's not clear what Dr. Murphy means by the word "assortment." He seems to be suggesting that there is a product mix or product composition issue in which the Varsity cheer competition shoes in the comparison set are fundamentally different from the Nfinity cheer competition shoes in the comparison set. The difference, based on my research, is that Nfinity cheer competition shoes are higher quality.[613] Dr. Murphy speculates that "if there are any differences in assortment or branding that make Varsity shoes and Nfinity shoes each relatively more attractive to different consumer segments," but offers no evidence that either company targeted specific customer segments as Dr. Murphy hypothesizes.[614] Further, Dr. Murphy offers no support for his opinion that "Varsity's brands targeted more premium apparel purchasers and Nfinity targeted more value-oriented purchasers."[615] He cites to a single Varsity presentation from 2016 that characterizes Nfinity products as "medium quality (not quite at Varsity level)."[616] It is not surprising to read an internal Varsity document that boasts about the quality of its

[611] Heeb Report, Table 23; ¶¶ 306-307.
[612] Murphy Report, ¶ 413 (internal citations omitted).
[613] TheCheerBuzz, "Guide: The Top 7 Best Cheerleading Shoes (Ranked by Actual Athletes)," June 8, 2021, accessed June 7, 2022, available at: https://www.thecheerbuzz.com/guide-the-top-7-best-cheerleading-shoesranked-by-actual-athletes/; YouTube, "Nfinity Vengeance VS Varsity Last Pass," accessed June 9, 2022, available at: https://www.youtube.com/watch?v=L6cLgSJDR6A.
[614] Murphy Report, ¶ 413.
[615] Murphy Report, ¶ 413.
[616] VAR00349671, at -673.

own products and demeans (slightly) the quality of its rival's products. Importantly, Dr. Murphy ignores a fact from the exact same slide that he cites to that provides strong evidence that Varsity recognized the high quality of Nfinity products, namely that Varsity previously sought to replace its own manufacturing with Nfinity's: "Varsity approached Nfinity to become manufacturer for Varsity shoes in 2010."[617]

586. Based on my analysis, Varsity has been able to sustain elevated price levels for its cheer competition shoes, relative to Nfinity, despite selling inferior quality shoes. This ability is hallmark of market power.[618]

587. Dr. Murphy writes, "consider that Dr. Heeb's method can generate a positive overcharge even in a (hypothetical) situation where two firms sell products of the same quality at the same price" and then proceeds to discuss a hypothetical example with low-quality and high-quality models of shoes.[619]

588. Dr. Murphy does not analyze any data and does not perform any quantitative analysis in forming his opinions about apparel overcharge. Dr. Murphy's hypothetical situation has no evidentiary support in this litigation and the facts in this case bear no resemblance to the situation that he invents.

589. Based in fact, and from my empirical analysis using data produced in this litigation, there is a distribution of quality for the Varsity cheer competition shoes and a distribution of quality for the Nfinity cheer competition shoes. However, the quality at the same point of each respective percentile in the price distribution is higher for Nfinity than for Varsity.[620] Thus, comparing Nfinity shoes at the 5th percentile for price and Varsity shoes at the 5th percentile for price means comparing a higher-quality Nfinity shoe to a lower-quality Varsity shoe. It is possible that Nfinity shoes at the 5th percentile for price are similar in quality to Varsity shoes at the 75th percentile for price, but this is not the comparison that I make. Thus, given that Nfinity shoes are higher quality than Varsity, my methodology to estimate overcharge in the cheer apparel market will **understate** the price difference between Varsity and Nfinity.

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[617] VAR00349671, at -673.
[618] Heeb Report, ¶¶ 185-193.
[619] Murphy Report, ¶ 414 (internal citations omitted).
[620] TheCheerBuzz, "Guide: The Top 7 Best Cheerleading Shoes (Ranked by Actual Athletes)," June 8, 2021, accessed June 7, 2022, available at: https://www.thecheerbuzz.com/guide-the-top-7-best-cheerleading-shoesranked-by-actual-athletes/; YouTube, "Nfinity Vengeance VS Varsity Last Pass," accessed June 9, 2022, available at: https://www.youtube.com/watch?v=L6cLgSJDR6A.

590. Moreover, Dr. Murphy's hypothetical example contains flawed conceptual arguments. Under the hypothetical numbers in Dr. Murphy's example, the first firm has a 23% overcharge relative to the second firm due to a higher fraction of the high-quality sales.[621] Algebraically, the first firm makes higher revenue per unit sold than the second firm. Further, as is standard in apparel retail markets in which higher-quality items earn a higher profit margin, the first firm makes higher profit per unit sold relative to the second firm. Thus, the first firm has a larger market share (holding units sold constant across the firms) and a higher share of the total profits (holding units sold constant across the firms).

591. Why would the second firm cede market dominance to the first firm, without making the necessary investments in marketing to compete for the high-quality sales? If the second firm is unable to effectively compete with the first firm for the high-quality sales, one potential explanation could be the anticompetitive market power of the first firm. Dr. Murphy would opine that this market allocation represents a competitive allocation. My opinion is different. As an economist, I would expect that a competitive allocation would have identical shares of the low-quality unit sales relative to the high-quality unit sales for both the first and the second firm.

592. Dr. Murphy writes, "Dr. Heeb's 'overcharge' methodology is so sensitive to consumer choices among the firms' products and would calculate very different 'overcharges' for the same set of prices also shows that his method is unreliable."[622]

593. Dr. Murphy does not analyze any data and does not perform any quantitative analysis in forming his opinions about apparel overcharge. It is not clear what it means to be "sensitive to consumer choices" when those consumer choices are hypothetical situations of Dr. Murphy's own creation (as previously addressed). As previously described, he performs no empirical analysis and uses no actual data in his hypothetical situations.

594. Dr. Murphy writes, "even if Dr. Heeb had devised a valid method of calculating an overcharge for cheer shoes, he has not shown, and there is no reason to believe, that overcharge for shoes attributable to the alleged conduct, if any, was at all representative of overcharges on other apparel products or even whether overcharges on other apparel products exist. … That is, even if Dr. Heeb's estimated overcharge for cheer shoes were valid, it would

[621] See Murphy Report, ¶ 414.
[622] Murphy Report, ¶ 415 (internal citations omitted).

only be valid for sales of cheer shoes."[623]

595. Dr. Murphy does not analyze any data and does not perform any quantitative analysis in forming his opinions about apparel overcharge. As I wrote in my first report, "the three categories of shoes, uniforms, and lettering account for about 78% of total apparel revenues across the six categories. About 86% of customers that purchase from three or more categories of apparel will purchase shoes, and 98% and 99% of customers purchasing from three or more categories will purchase uniforms and lettering, respectively."[624] Dr. Murphy offers no response to this analysis and does not perform any alternative versions of this analysis. Based on that analysis, as I wrote in my first report, "[o]f the three categories of uniforms, lettering, and shoes, shoes is the category for which there is the most competition, as indicated by the fact that of the three, this is the category for which more teams do not purchase from Varsity (14% of customers with three or more categories, compared to less than 2% for uniforms and lettering). This fact implies that Varsity's customers are likely more price sensitive regarding shoes. The monopolist has an incentive to put a smaller fraction of the total overcharge onto the most price sensitive product, so the estimate of the overcharge for shoes is likely a good estimate of a lower bound for the overcharges on the other two most purchased product categories (uniforms and lettering)."[625] Dr. Murphy offers no response to these opinions and offers no empirical evidence to refute them. Finally, I opine that since the 11.0% overcharge is appropriate for shoes, uniforms, and lettering, which "account for about 78% of total apparel revenues across the six categories," then the 11.0% overcharge is an appropriate estimate of the overcharge "for the apparel market as a whole."[626] Dr. Murphy offers no response to these opinions and offers no empirical evidence to refute them.

596. Dr. Murphy writes, "Dr. Heeb's methodology ignores value-added services that Varsity provides alongside its shoes and other apparel when sold to schools and gyms."[627]

597. Dr. Murphy does not analyze any data and does not perform any quantitative analysis in forming his opinions about apparel overcharge. First, Dr. Murphy does not explain why cheer

[623] Murphy Report, ¶ 416 (internal citations omitted).
[624] Heeb Report, ¶ 306 (internal citations omitted).
[625] Heeb Report, ¶ 307 (internal citations omitted).
[626] Heeb Report, ¶ 307.
[627] Murphy Report, ¶ 417 (internal citations omitted).

athletes need a Varsity employee to tell them what their shoe size is, or why they should pay for such a service. If Varsity wants to invest in customer relationships, it is welcome to do so. But those investments should not be subtracted from the price of the shoe. That's like telling an iPhone customer that the effective price of the iPhone is less than what they paid for it, because the customer had the privilege of watching the iPhone commercials and the costs to make such commercials should be applied to determine the psychological effective price. My price comparison is product-to-product, without subtracting off these psychological "value-added services."

598. Second, in terms of just the quality of the products, Varsity cheer competition shoes are the Motel 6 in Dr. Murphy's example, and Nfinity cheer competition shoes are the Peabody Hotel. According to all available evidence, Nfinity cheer competition shoes are higher quality than Varsity's cheer competition shoes.[628]

599. Dr. Murphy writes, "Dr. Heeb's comparison of shoe prices is the only empirical evidence that Plaintiffs' experts have put forth to attempt to show harm to cheer apparel consumers. The 10% overcharge he calculates is the only basis for his assessment of harm to apparel customers in the proposed class."[629]

600. Dr. Murphy does not analyze any data and does not perform any quantitative analysis in forming his opinions about apparel overcharge. I performed a quantitative analysis comparing the prices of shoes and estimated that Varsity's cheer competition shoes (of inferior quality) had a 11.0% overcharge relative to a rival's cheer competition shoes.[630] It's unclear why Dr. Murphy believes that an empirical fact documenting that Varsity overcharges its customers by 11.0% for its cheer competition shoes is "uninformative."[631] Quantitative analysis and empirical evidence of this nature is the exact type of facts that economists find informative in evaluating harm to competition.

601. Further, as I wrote in my first report, "[o]f the three categories of uniforms, lettering, and shoes, shoes is the category for which there is the most competition, as indicated by the fact

[628] TheCheerBuzz, "Guide: The Top 7 Best Cheerleading Shoes (Ranked by Actual Athletes)," June 8, 2021, accessed June 7, 2022, available at: https://www.thecheerbuzz.com/guide-the-top-7-best-cheerleading-shoesranked-by-actual-athletes/; YouTube, "Nfinity Vengeance VS Varsity Last Pass," accessed June 9, 2022, available at: https://www.youtube.com/watch?v=L6cLgSJDR6A.
[629] Murphy Report, ¶ 418 (internal citations omitted).
[630] Heeb Report, Table 23.
[631] Murphy Report, ¶ 418.

that of the three, this is the category for which more teams do not purchase from Varsity (14% of customers with three or more categories, compared to less than 2% for uniforms and lettering). This fact implies that Varsity's customers are likely more price sensitive regarding shoes. The monopolist has an incentive to put a smaller fraction of the total overcharge onto the most price sensitive product, so the estimate of the overcharge for shoes is likely a good estimate of a lower bound for the overcharges on the other two most purchased product categories (uniforms and lettering)."[632] Given this evidence, since the 11.0% overcharge was appropriate for shoes, uniforms, and lettering, which "account for about 78% of total apparel revenues across the six categories," then the 11.0% overcharge is an appropriate estimate of the overcharge "for the apparel market as a whole."[633] Dr. Murphy offers no response to these opinions and offers no empirical evidence to refute them.

VI. MY ASSESSMENT OF CLASS-WIDE HARM IS ACCURATE AND IS CONFIRMED BY THE EMPIRICAL REGRESSIONS THAT DR. MURPHY PROPOSES

602. Dr. Murphy writes, "[c]orrecting even a few of these errors to Dr. Heeb's regressions causes his overcharges … to plummet."[634] Dr. Murphy then proceeds to offer alternative damage numbers as reported in his Exhibit 59.[635]

603. I previously detailed the numerous flaws with Dr. Murphy's arguments, both conceptual and algebraic. Further, I previously described my updated price overcharge analyses for the cheer competitions markets and the cheer apparel market. I demonstrated that the anticompetitive price effects were common across geographic regions in the cheer competitions markets and that a nationwide overcharge properly quantifies the harm to Class Members in those markets. Finally, I calculated that no more than a *de minimus* fraction of Class Members were unharmed by Varsity's anticompetitive conduct across the relevant antitrust markets.

604. Dr. Murphy writes, "Plaintiffs and Dr. Heeb provide no reasonable economic analysis or valid empirical evidence to support their claim that all or nearly all members of the direct purchaser classes were harmed as a result of the challenged conduct or that the extent of any harm to direct or indirect purchasers can be evaluated using common methods and common

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[632] Heeb Report, ¶ 307 (internal citations omitted).
[633] Heeb Report, ¶ 307.
[634] Murphy Report, ¶ 421 (internal citations omitted).
[635] Murphy Report, ¶ 421; Exhibit 59.

evidence."[636]

605. In my first report, I performed quantitative analysis to evaluate competitive effects at the level of the CSA, which is a geographic area smaller than USASF regions.[637] I updated that analysis in this report, as previously described. The CSA analysis permits me to count the number of CSAs for which there is no harm, specifically for which there is no demonstrated harm from Varsity's anticompetitive conduct in the cheer competitions markets. Then, based on the customers that attended Varsity competitions in such CSAs, I count the number of Class Members that were not harmed by Varsity's anticompetitive conduct in the cheer competitions markets. I cross-checked those customers to see if they purchased apparel from Varsity in the cheer apparel market (and would have thus suffered harm based on the demonstrated Varsity apparel overcharge of 11.0% on cheer competition apparel) or if the customers attended events in other CSAs for which there was demonstrated harm (and would have thus suffered harm overall based on attendance in the other CSAs). After performing these quantitative checks of each customer's purchasing and attendance behavior, I ultimately conclude (see Table 7) that at most 0.06% of the Class Members did not suffer harm from Varsity's anticompetitive conduct (across the cheer competitions markets and the cheer apparel market).[638]

606. Dr. Murphy performed no analysis relevant to the question of how many Class Members were harmed by the challenged conduct. I demonstrated, by the very calculations that I described above, that the number of Class Members harmed and the amount of harm (in total and per Class Member) can be calculated using common methods and common evidence. Dr. Murphy assumes, instead, that such calculations cannot be done. But nowhere does he respond to my CSA analysis, nowhere does he offer alternative analysis, and nowhere does he identify any empirical evidence that is inconsistent with my analysis.

VI.A. My Analysis of Class-Wide Harm Is Accurate and Reliable

VI.A.1. My competition overcharge analysis establishes harm for All-Star competitions

607. Dr. Murphy writes, "the regression analysis at the core of Dr. Heeb's competitive effects

[636] Murphy Report, ¶ 424 (internal citations omitted).
[637] Heeb Report, ¶¶ 141-144; ¶¶ 313-316; ¶¶ 327-331; Table 27.
[638] See also Heeb Report, ¶¶ 327-331; Table 27 for the version of the CSA analysis from my first report.

analysis and assessment of harm is severely flawed and completely unreliable" and then proceeds to describe what he claims are errors with my analysis.[639]

608. As previously described, I updated my price overcharge analysis in accordance with some of the facts identified by Dr. Murphy. However, as previously described, many of Dr. Murphy's critiques are baseless, unfounded, and unrelated to the analysis that I performed. My updated price overcharge analysis for the cheer competitions markets identified a price overcharge of 27.4%, which is statistically significant, economically substantial, and represents the overcharges across the five regional geographic markets (see Table 23 and Table 24).

609. Importantly, I have direct evidence of harm for the acquired brand events for which I demonstrated significant increases in real prices after Varsity completed the acquisition. This evidence is part and parcel of a broader anticompetitive scheme that additionally included the cancellation of 30% of the acquired brand events (see Table 18) and reduced the total participation at acquired brand events by 42% (see Table 14). The 14 World Bids Events that Varsity acquired with acquisitions between 2015 – 2018 each had demonstrable and substantial real price increases (see Table 35 and Table 37 through Table 43). The World Bids Events were in Indianapolis, IN; Columbus, OH; National Harbor, MD; Kansas City, MO; Chicago, IL; Wildwood, NJ; Bakersfield, CA; Phoenix, AZ; Dallas, TX; Bellevue, WA; Schaumburg, IL; New Orleans, LA; Atlantic City, NJ; and Ocean City, MD. Given Dr. Murphy's own opinions that the median travel distance for entrant at World Bids Events was greater than 150 miles (and with 10% of entrants traveling more than 500 miles for World Bids Events) prove that the harm from these substantial real price increases was not limited to the zip code or city where the events took place.[640] I additionally have demonstrated evidence that Varsity increased the real prices for nearly all of the 132 acquired brand events that Varsity continued to operate (see Table 1 and Table 37 through Table 43), which includes events in nearly every MSA in which Varsity hosted competitions. The MSAs within 150 miles of an acquired World Bids Event and the MSAs containing an acquired brand event with a real price increase greater than 5% (only for the acquisitions from 2015-2018 for which I have data) comprise nearly all 130 MSAs in which Varsity held competitions between the 2016-2017 season and the 2019-2020 season, and it is these MSAs

[639] Murphy Report, ¶ 425 (internal citations omitted).
[640] Murphy Report, Exhibit 32.

that are relevant for antitrust injury. Isolated geographic areas in the United States in which Varsity did not host competitions are not relevant for Class-wide harm as no Class Members attended Varsity competitions (and thus paid inflated price to Varsity) in those isolated areas. Dr. Murphy offers no response to this direct evidence.

610. Dr. Murphy writes, "Dr. Heeb's 'competitive benchmarks' do not include any scholastic competitions (i.e., competitions that he classifies as 'School')."[641]

611. Varsity did not acquire any school events during the Class Period or in the seasons for which Varsity registrations data was available. The competitive benchmark for All-Star events consisted of events for which a rival event producer set the price (e.g., events operated by rival event producers prior to being acquired by Varsity). With no observable Varsity acquisitions of school competitions in the available data, the competitive benchmark does not include any school events. The available evidence confirms my opinions that the relevant product market includes both All-Star and school competitions. As a practical matter, the calculation of class-wide harm includes harm across all products in that market. Thus, the point of contention between Dr. Murphy and myself is the issue of relevant product market definition. I defined the relevant product market to include both All-Star competitions and school competitions based on the significant similarities between those competitions and the significant overlap of teams (i.e., school teams that compete in All-Star competitions). With a properly defined relevant product market, I analyze competitive effect and demonstrate harm to competition using a price overcharge regression methodology with a competitive benchmark to control for the prices that would otherwise be observed for Varsity competitions, absent anticompetitive conduct. Once harm to competition, in the form of the price overcharge, are estimated, it is appropriate to apply the price overcharge, estimated over all competitions in the relevant product market, to all competitions in that relevant product market.

612. Dr. Murphy writes, "Dr. Heeb fails to provide a coherent theory of harm explaining what purported Varsity conduct impacted prices at scholastic competitions."[642]

613. Dr. Murphy fails to adequately distinguish between All-Star and school competitions. If just one school team competes in a competition, along with hundreds of All-Star teams, Dr.

[641] Murphy Report, ¶ 426 (internal citations omitted).
[642] Murphy Report, ¶ 427 (internal citations omitted).

Murphy defines such a competition as a "scholastic competition." This classification belies the reality of the industry. The fact that school teams and All-Star gyms compete at the same competitions is evidence in support of my relevant product market definition for cheer competitions, namely a relevant product market that include both All-Star and school teams.

614. My overcharge analysis explicitly includes school competitions in the regressions and the estimated overcharges, both at the regional level and at the national level. In similar fashion, my overcharge analysis explicitly includes different types of competitions in the regressions and the estimated overcharges: regular-season and postseason competitions; World Bid Events and non-World Bid Events; and 1-day competitions and 2-day competitions. The theory of harm, based primarily on my price overcharge analysis, is that Varsity acquired, maintained, and expanded its market power in the cheer competitions markets through its anticompetitive conduct, and exploited its market power to charge elevated prices for all its competitions in the cheer competitions markets, with estimated overcharge equal to 27.4%. This theory of harm includes Varsity's exploitation of market power and price overcharge across ***all*** competitions in the relevant product market, including school competitions.

VI.A.2. My competition overcharge analysis and economic principles establish harm for camps

615. Dr. Murphy writes, "Dr. Heeb does not attempt to separately quantify harm to the proposed class from the alleged conduct related to cheer camps."[643]

616. My opinion that camps are "more of a discrete purchase" means simple that the number of camps that an athlete will attend is a smaller discrete number than the number of competitions that a team will attend each season.[644] Typically, teams attend just one camp. Thus, the marginal decision about the total spend on camps is based just on the price of one camp. If marginal teams have less elastic demand with respect to camp attendance (either go to camps or not), possibly due to a need to receiving training to improve skills, then Varsity as the monopolist is able to extract a larger monopolist rent.

617. The marginal decision about whether to participate in competitions may be, for example, whether a team wants to compete in five events or six events during the season, or to substitute a more distance event for nor a nearer event. While the team may have less elastic

[643] Murphy Report, ¶ 428 (internal citations omitted).
[644] Murphy Report, ¶ 428.

demand with respect to competitions broadly across the season, i.e., over the decision about whether to compete in events or not, the marginal decision about five versus six events is likely to have a relatively more elastic demand. Thus, all else equal, customers would tend to be more sensitive at the margin to changes in competition pricing than they would be to changes in camp pricing. Since Varsity's pricing strategy would be intended to optimize the combined profits of camps and events (and apparel), I would expect to observe lower monopolist overcharges for competitions than for camps. Thus, the empirically estimated overcharge of 27.4% for competitions is also an empirical estimate of a theoretical lower bound for the overcharge that Varsity can extract for camps. Dr. Murphy has provided no empirical evidence or analysis to support his suggestion that this lower bound is incorrect.

618. Dr. Murphy complains that I did not do any empirical analysis related to changes in prices that he presumes would have occurred in response to the institution of the Squad Credentialing requirement.[645] However, Plaintiffs' theory of harm does not predict that there would be a price response caused by this new policy. It is Plaintiffs' theory that Varsity instituted the Credentialing requirement understanding that this would have maintained and preserved Varsity's market power, which was already established before the policy was implemented.

619. Varsity did not acquire any rival cheer camp producers during the Class Period nor during the period with available data, which includes seasons as far back as the 2013-2014 season. Thus, consistent with Varsity's anticompetitive pricing behavior in its legacy cheer competitions, as I previously discussed, the evidence indicates that Varsity was a monopolist in the cheer camps markets prior to 2014 and exploited its monopoly power to set the prices for its camps at the anticompetitive monopolist price level. For the same reason that Varsity did not increase the prices for its legacy competitions during the Class Period, since increases in price above the monopolist price level would only reduce profits, Varsity likewise had no incentive (in fact, a disincentive) to increase prices for camps. Dr. Murphy has performed no analysis to refute my opinion that Varsity's cheer camps prices were already set at the monopolist price level in the available data. Further, he has ignored evidence on Varsity's market share in the cheer camps markets that establishes Varsity's market power sufficient

[645] Murphy Report, ¶ 429 (internal citations omitted).

to maintain camps pricing at monopolist price levels.

620. Dr. Murphy writes, "Dr. Heeb has failed to establish harm to any proposed Class Member on even a conceptual basis. ... Almost all schools that attend Varsity's camps lack any need to be credentialed, and therefore must be attending camps for other benefits. The Squad Credentialing program, even if it were correctly considered a tying mechanism, simply does not apply to a substantial portion of the customer base in camps."[646] Dr. Murphy provides no support for his claim that "[a]lmost all schools that attend Varsity's camps lack any need to be credentialed."[647]

621. My analysis of the squad credentialing requirement was part of my analysis of the totality of Varsity's anticompetitive scheme, which included numerous different types of conduct, and which recognizes the joint decision by school-sponsored cheer participants over purchases from all three implicated product markets. While demonstrable negative economic effects, such as increased real prices for acquired brand events, decreased participant counts for acquired brand events, and elevated Varsity cheer apparel prices are the most readily empirically quantifiable elements of economic harm for Class Members, the totality of the conduct is only evaluated, conceptually, by including all different forms of anticompetitive conduct.

622. It is improper, as Dr. Murphy has done, to analyze each element of the conduct in isolation without analyzing the overall effects of the conduct in totality. This is because the conduct was not implemented in isolation, but part of a broader anticompetitive scheme by Varsity to acquire, maintain, and expand its monopoly power in the relevant antitrust markets. Thus, while I do not identify or calculate harm based solely from the squad credentialing requirement, due to lack of available data, it is important to include a conceptual analysis of the anticompetitive effects that arise from such a restriction. As I previously described, this restriction combined with Varsity's market power in the cheer competitions markets and Varsity imposed links between those product (including Varsity's monopolistic pricing of the various components of the total cost of participation) to prolong its ability to extract monopoly rents from Varsity's camp customers.

[646] Murphy Report, ¶ 430 (internal citations omitted).
[647] Murphy Report, ¶ 430.

VI.A.3. My apparel overcharge analysis establishes harm for apparel

623. Dr. Murphy writes, "I also explained that Dr. Heeb's apparel 'overcharge' calculation is likewise severely flawed. Dr. Heeb purports to extrapolate an overcharge calculated for shoes to the broader set of apparel products, including uniforms and camp-wear, that Varsity supplies, despite these products being in clearly different product markets with different economic conditions."[648]

624. First, I identified an overcharge of 11.0% for Varsity cheer competition shoes relative to the competitive benchmark of Nfinity cheer competition shoes (see Table 31). This is likely an understatement of the overcharge on Varsity cheer competition shoes for two reasons. First, Nfinity shoes are, by the available evidence, better and higher quality cheer competition shoes than the Varsity shoes.[649] Second, the overcharge was estimated over a three-year period 2017-2019.[650] The overcharge estimate from 2016 was 27.1% (see Table 31).[651] Including this year would increase the average well above 11.0%. Thus, my estimate is conservative.

625. Second, as I wrote in my first report, "the three categories of shoes, uniforms, and lettering account for about 78% of total apparel revenues across the six categories. About 86% of customers that purchase from three or more categories of apparel will purchase shoes, and 98% and 99% of customers purchasing from three or more categories will purchase uniforms and lettering, respectively."[652] Based on that analysis, I opined in my first report that "[o]f the three categories of uniforms, lettering, and shoes, shoes is the category for which there is the most competition, as indicated by the fact that of the three, this is the category for which more teams do not purchase from Varsity (14% of customers with three or more categories, compared to less than 2% for uniforms and lettering). This fact implies that Varsity's customers are likely more price sensitive regarding shoes. The monopolist has an incentive to put a smaller fraction of the total overcharge onto the most price sensitive product in a

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[648] Murphy Report, ¶ 431 (internal citations omitted).
[649] TheCheerBuzz, "Guide: The Top 7 Best Cheerleading Shoes (Ranked by Actual Athletes)," June 8, 2021, accessed June 7, 2022, available at: https://www.thecheerbuzz.com/guide-the-top-7-best-cheerleading-shoesranked-by-actual-athletes/; YouTube, "Nfinity Vengeance VS Varsity Last Pass," accessed June 9, 2022, available at: https://www.youtube.com/watch?v=L6cLgSJDR6A.
[650] Heeb Report, Table 23.
[651] Heeb Report, Table 23.
[652] Heeb Report, ¶ 306 (internal citations omitted).

bundle, so the estimate of the overcharge for shoes is likely a good estimate of a lower bound for the overcharges on the other two most purchased product categories (uniforms and lettering)."[653] Dr. Murphy offers no response to these opinions and offers no empirical evidence to refute them.

VI.B. Dr. Murphy's Analysis of Harm Assessment and Damages Is Unsupported by any Quantitative Analysis of Class Certification Issues

626. Dr. Murphy concludes, "that many members of the proposed classes were not harmed by, and even benefitted from, the alleged anticompetitive conduct. Furthermore, calculating damages for those individual class members, if any, that were harmed would require case-by-case analysis and is not amenable to class-wide treatment."[654]

627. I disagree, and I performed quantitative analysis to support my opinions. Dr. Murphy, by contrast, performed no empirical analysis to support these conclusions. Dr. Murphy suggests, but does no empirical analysis to demonstration, that there may be heterogeneity in competitive harm. I have demonstrated that nearly all Class Members suffered competitive harm and that the effects of Varsity's conduct had common impact for the entire Class. This determination was based on both common methods and common evidence, as I demonstrated with my price overcharge analysis for the cheer competition and the cheer apparel markets, and by analytical reasoning, inferred an empirically based lower bound on camp market overcharges. Dr. Murphy provided no such analysis.

628. Dr. Murphy concludes, "that Plaintiffs have not shown universal or near-universal harm, or any harm at all, and that any harm of the alleged anticompetitive conduct would have been limited to a portion of the class, if any."[655]

629. Again, I disagree, and I performed quantitative analysis to support my opinions. As previously described, the quantitative analysis described in my first report, and updated for this report, analyzes competitive effects at the level of the CSA, which is a geographic area smaller than USASF regions.[656] MDH - That analysis allows me to count the number of CSAs for which there may be no harm, because Varsity's implied market power below the

630. there is no harm, specifically for which there is no demonstrated harm from Varsity's

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[653] Heeb Report, ¶ 307 (internal citations omitted).
[654] Murphy Report, ¶ 442 (internal citations omitted).
[655] Murphy Report, ¶ 443 (internal citations omitted).
[656] Heeb Report, ¶¶ 141-144; ¶¶ 313-316; ¶¶ 327-331; Table 27.

anticompetitive conduct in the cheer competitions markets. Then, based on the customers that attended events in such CSAs, I count the number of Class Members that were not harmed by Varsity's anticompetitive conduct in the cheer competitions markets. I cross-check those customers to see if they purchased apparel from Varsity in the cheer apparel market (and would have thus suffered harm) or if the customers attended events in other CSAs for which there was demonstrated harm (and would have thus suffered harm overall based on attendance in the other CSAs). After performing these quantitative checks of each customer's purchasing and attendance behavior, I ultimately conclude (see Table 7) that at most 0.32% of the Class Members did not suffer harm from Varsity's anticompetitive conduct (across the cheer competitions markets and the cheer apparel market).[657]

631. Dr. Murphy writes, "registration fees were set on a competition-by-competition basis and responsive to local conditions. Even if some registration fees were higher than they would have been absent the alleged anticompetitive conduct, there is no reason to believe that prices of all Varsity competitions were higher."[658]

632. First, Dr. Murphy suggests that only "some registration fees were higher."[659] To the contrary, the acquisition of the seven acquired brands for which we have available data (Aloha, All Things Cheer, CSG, EPIC, JamBrands, Mardi Gras, and Spirit Celebration) represented well over 200+ events, and real prices were higher for nearly all of them. Across the acquired brand events, my analysis calculated a 24% real price increase in registration fees post-acquisition (relative to pre-acquisition; see Table 1) and a 42% decrease in participation post-acquisition (see Table 18). Table 37 through Table 50 in the Appendix show that real prices increased for the majority of acquired brand events that Varsity continued to operate.

633. Second, elevated price levels relative to competitive price levels were not limited to acquired brand events. For Varsity's legacy events, no significant real price increases were identified as the prices for these events was already set at anticompetitively high monopolist price levels before the acquisitions and before the earliest data available to me in this litigation. The acquired brand evidence, and the other evidence that I cite above, supports my opinion that Varsity was a monopolist and was charging the monopoly price for all its legacy events

[657] See also Heeb Report, ¶¶ 327-331; Table 27 for the version of the CSA analysis from my first report.
[658] Murphy Report, ¶ 444 (internal citations omitted).
[659] Murphy Report, ¶ 444.

prior to 2014. Thus, the registration fees were elevated above competitive levels for nearly all Varsity cheer competitions in the United States during the Class Period. Dr. Murphy's flawed conceptual theory does not even permit him to consider the possibility that Varsity was operating as a monopolist as early as 2014.

634. Dr. Murphy writes, "Varsity's event closures were limited and even if some of the closures were found to be anticompetitive, there is no reason to believe that these closures would have affected all, nearly all, or even many, of the proposed class members."[660]

635. Dr. Murphy's analysis of total participation changes before and after acquisition is inaccurate. Dr. Murphy concludes that "total attendance increased across these brands post-acquisition, even when accounting for closed events."[661] Dr. Murphy's conclusion that "total attendance increased" is incorrect as total participation in the acquired brand events decreased by 35%, as previously shown in Table 18 above.

636. First, Dr. Murphy's data inputs for his analysis are incorrect. He undercounts total participation in the pre-acquisition events (before acquisition) and inflates total participation in post-acquisition events. Second, Dr. Murphy compares the "Average Participation per Event" in his Exhibit 45, when the relevant measure of participation is "Total Participation." Third, Dr. Murphy ignores the changes in real price and participation for the "Unmatched" events and by doing so ignores the quantity effects from the net loss of acquired brand events because of Varsity's acquisition. To calculate net loss, I calculate the number of acquired events that Varsity discontinued in the first season after acquisition and subtract the number of new events that Varsity operated that used the acquired brand in the first season after acquisition. This net loss of acquired brand events is compared to the total number of events offered by the acquired companies before acquisition. Specifically, as reported in the Appendix, Varsity eliminated (on net) nine of the 25 Aloha events, one of the three ATC events, 16 of the 25 CSG events, six of the 73 EPIC events, 42 of the 109 JamBrands events, five of the 11 Mardi Gras events, and two of the 12 SCB events.

637. My analysis, both here and in my first report, considers both the real price changes and the total participation changes.[662] My first report summarized the nominal price changes using

[660] Murphy Report, ¶ 445 (internal citations omitted).
[661] Murphy Report, ¶ 295.
[662] Heeb Report, Tables 19 and 20.

basic statistics to summarize the general properties across the distribution of all acquired events. I extended this analysis in this report by reporting the real price and total participation changes for all acquired brand events across the entire distribution (see Table 37 through Table 50).

638. Dr. Murphy concludes, "the effects of any acquisitions found to be anticompetitive are likely to be contained to specific geographic areas. Class Members that did not attend competitions in those specific areas would not have been harmed."[663]

639. I agree with Dr. Murphy. If specific areas can be identified without any harm, then Class Members that only attended events in those specific areas would not have been harmed. First, Dr. Murphy suggests that the acquired brand events only occurred in a small number of localized areas. To the contrary, the acquisition of the seven acquired brands for which we have available data (Aloha, All Things Cheer, CSG, EPIC, JamBrands, Mardi Gras, and Spirit Celebration) represented well over 200+ events spread across all five USASF regions and all major CSAs. The fact that a few of the acquisitions were regional in nature, such as Spirit Celebration in Texas, does not mean that all acquisitions, when considered in their totality, did not represent a nationwide effect across all major CSAs.[664]

640. Second, the harm to Class Members at Varsity events was not limited to acquired brand events. I identified and estimated significant real price increases following acquisition. This acquired brand evidence, and the price overcharge analysis that I described above, is consistent with my opinion that Varsity was a monopolist and was charging the monopoly price for all its legacy events prior to 2014. Thus, Class Members that paid to attend any Varsity acquired brand event were harmed and paid higher real prices than they otherwise would have (absent the conduct) and Class Members that paid to attend any Varsity legacy event were harmed as well and paid higher real prices than they otherwise would have (absent the conduct).

641. When combining these two points, my calculation of harm across the Class was based on identifying harm at the level of the CSA. The CSA analysis is based on variations in Varsity

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[663] Murphy Report, ¶ 446 (internal citations omitted).

[664] The acquisition of Aloha Productions in December 2016 included the event brands Aloha Spirit, Golden State Spirit Association (GSSA), and Mid Atlantic Championships (MAC). The acquisition included a World Bids Event in Wildwood, NJ under the MAC brand. Dr. Murphy's statement that Aloha only had events in the West Coast is factually incorrect. See Murphy Report, ¶ 202.

event participation across CSAs in which Varsity events take place. Event participation is the key factor that drives the size of harm. I have demonstrated that Varsity registration fees are elevated. At those elevated prices, harm, in terms of which Class Members are harmed and by how much, then depends on identifying participants at Varsity events. I identify such participants at the level of the CSA. The baseline for each CSA is normalized based on the population of that CSA, but the empirical results are driven by variations in attendance across CSAs. The competitive impact of the variations in attendance is reported relative to the benchmark All-Star competition event count market share for each region and season. The analysis identifies harm in nearly all CSAs and for nearly all entrants at Varsity competitions.

642. Dr. Murphy writes, "if Varsity's VFP program or VNAs are found to involve anticompetitive conduct, then any quantified harm of such conduct would have to be offset by the benefits that class members received from either of these programs."[665]

643. Dr. Murphy's claims of the benefits from conditional rebates are unsupported. The benchmark is not what gyms would pay to Varsity if they were forced to return their rebates to Varsity; the benchmark is what the gyms would pay to Varsity absent Varsity's anticompetitive conduct.[666] That conduct includes the restrictions prescribed by the conditional rebates programs, the lack of choice and Varsity's market power in the cheer competitions markets, and the empirical evidence showing that Varsity has been able to maintain and sustain an overcharge of 27.4% on its competition prices relative to a competitive benchmark.

644. As I opined in my first report, "Varsity's pricing strategy inherently incorporates the recognition that many Varsity events were already at monopoly prices (that is, price levels at which Varsity's ability to raise price is constrained not by the threat of competition, but from the concern that customers will simply not purchase at such high prices). In response, Varsity focused on increasing prices where it could, rationalizing its event offerings to reduce intra-firm competition created by acquisitions, and incentivizing and enabling gyms to send teams to more events than the participants and parents would themselves prefer to purchase, thereby increasing its supracompetitive profits."[667] There are no benefits for gyms from such

[665] Murphy Report, ¶ 447 (internal citations omitted).
[666] See the extensive discussion of conditional rebates beginning at ¶ 273, and particularly ¶¶ 278-284.
[667] Heeb Report, ¶ 199 (internal citations omitted).

anticompetitive conduct (relative to the competitive benchmark); and certainly not any benefits to the indirect purchasers, since the gyms did not pass the collected rebates on to the athletes' parents.[668]

645. Dr. Murphy writes, "Plaintiffs and their experts attempt to overcome the stark differences among class members in terms of whether they would be affected by the alleged conduct by inventing a market definition that is inconsistent with the realities of All Star cheer competitions."[669]

646. As previously described, in my first report, I performed a quantitative analysis of harm at the level of a CSA, which is a localized geographic area (see Table 7).[670] Further, my price overcharge analysis, both in my first report and updated for this new report, confirmed that the anticompetitive effects of Varsity's conduct had common impact across all regions in the US (see Table 24 and Table 26).[671] I opined in my first report that: "That there is a cost of travel implies that there is a limit to how far teams may travel to avoid a price increase in event entry fees imposed by a monopolist. Cheer teams may routinely travel hundreds of miles to attend a competition. They may travel to various parts of the United States to participate in important events, such as the World or the Summit competitions, but would not routinely do so to attend regular season events. Therefore, events that were further away than this distance would not compete on price with each other, unless there were other events located between them that competed with both and effectively conveyed the competitive effect beyond the travel radius of an individual team. Thus, as a technical matter, the relevant geographic market for antitrust purposes is smaller than national, and larger than local communities. Hence it is regional."[672]

647. I performed analysis of travel by gyms to events across regions, the five USASF regions that I defined as geographic markets for cheer competitions, and an analysis of travel by gyms by number of CSAs. The empirical facts are that 87% of entrants stay in their home region for

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[668] Heeb Report, ¶ 195 ("These rebates amounted to kickbacks to those [gyms], the direct purchasers, who generally did not share those payments [with] the participants."). See also Deposition of Alexa Bray, January 11, 2022, 64:25-65:6 ("Q: Do you know what Stars & Stripes did with any rebate it received under the Family Plan? For example, did it refund it to the parents? A. It was not refunded to the parents. I don't know specifically, you know, what exactly it was spent on. No.").
[669] Murphy Report, ¶ 449 (internal citations omitted).
[670] See also Heeb Report, Table 27.
[671] Heeb Report, Tables 21 and 22.
[672] Heeb Report, ¶¶ 139-140 (internal citations omitted).

regular season competitions (only 13% leave the region for regular season competitions), while only 27% of entrants stay in their home CSA for regular season competitions (73% leave the CSA; see Table 11 and Table 12). Those analyses, as described above, further corroborate my opinions that "the relevant geographic market for antitrust purposes is smaller than national, and larger than local communities. Hence it is regional."[673]

648. Dr. Murphy writes, "Dr. Heeb constructed a regression specification that assumed away any limitations or differences within USASF regions in terms of which class members may be affected by the alleged conduct."[674]

649. Dr. Murphy is mistaken. He confuses antitrust injury with common harm. I identify and quantify harm to Class Members using a price overcharge analysis that compares the real prices for Varsity events to the real prices for a competitive benchmark. Based on this analysis, I concluded that Varsity's conduct harmed competition and quantified the degree of price overcharge (27.4%). Then, because Class Members paid (indirectly as indirect purchasers) to attend Varsity cheer competitions, they suffered antitrust injury. My empirical analysis established that the harm suffered by Class Members was common in the cheer competitions markets, finding that the regional overcharges were not statistically different (see Table 23 and Table 25) and that the design and implementation of the anticompetitive conduct was common across Class Members in the cheer competitions markets as well.

650. Dr. Murphy concludes, "[b]ecause of the limited scope of harm that any of the alleged anticompetitive conduct would likely have, evaluating harm to class members requires a detailed case-by-case analysis that is not amenable to common methods or common evidence" and then proceeds to describe his proposed method in which harm is based on the entire vector of competitions that a particular customer attended over the Class Period.[675]

651. Contrary to Dr. Murphy's claims, this case does not have substantial heterogeneity in competitive harm. I have demonstrated that nearly all Class Members suffered competitive harm and that the effects of Varsity's conduct had common impact for the entire Class. This determination was based on both common methods and common evidence, as I demonstrated with my empirical analysis. Dr. Murphy attempted no such analysis. He instead argues that

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[673] Heeb Report, ¶ 140
[674] Murphy Report, ¶ 450 (internal citations omitted).
[675] Murphy Report, ¶ 451 (internal citations omitted).

since each Class Member made different purchasing decisions, then harm must be calculated on a member-by-member basis. It is not clear from Dr. Murphy's theory, of which he offers no legal support and no citation to the academic economics literature, if it would be possible to evaluate harm on a class-wide basis ***in any case***.

652. Finally, Dr. Murphy concludes, "Plaintiffs have not provided any means by which direct transactions between Varsity and parents can be separated from indirect transactions, despite the evidence that Varsity's apparel revenue reflects a mix of both."[676]

653. Varsity is a sophisticated company and was acquired by Bain in 2018 for approximately $2.5 billion.[677] Bain is a publicly traded company and a sophisticated financial company. As such, Varsity maintains complete records of whether an apparel transaction included payment from an All-Star gym, payment from a school, or payment from a parent of an athlete. Varsity has evidence of whether a credit card in the name of an All-Star gym was used for an apparel purchase, or a credit card in the name of a parent of an athlete was used for an apparel purchase. It is likely that nearly all of Varsity's apparel transactions occurred via credit card. To the extent that some transactions at cheer competitions were cash transactions, then the purchaser in such transactions would be identified from Varsity's designation in its transaction-level apparel sales data. For all transactions, the means to separate direct transactions from indirection transactions are available in Varsity's own sales records and within the power of a $2.5 billion company and its corporate owner to maintain.

Randal Heeb, PhD
December 14, 2022

[676] Murphy Report, ¶ 453 (internal citations omitted).
[677] Lauren Hirsch, "Bain to acquire Varsity Brands, a top maker of cheerleader uniforms and school spirit items, for roughly $2.5 billion," CNBC.com, June 19, 2018, accessed on Nov. 8, 2021, available at: https://www.cnbc.com/2018/06/19/bain-nears-2-point-5-billion-deal-for-cheer-uniform-leader-varsity-brands.html

ATTACHMENT 1:
CURRICULUM VITAE OF RANDAL HEEB, PHD

Randal Heeb, Ph.D.

Senior Managing Director
Economic Consulting

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Education

BA, Economics,
University of Washington
MPA,
Harvard Kennedy School
PhD, Economics,
University of Chicago

Expertise

Antitrust & Competition Economics

Intellectual Property

Litigation Support & Consulting Services

International Arbitration

Commercial Damages Analysis

Industries

Diversified Industrials
Healthcare & Life Sciences
Telecom, Media & Technology (TMT)
Energy & Utilities
Hospitality, Gaming & Leisure

Randal Heeb has 35 years of experience providing economic analysis in both the private and public sectors. His expertise includes analysis of liability, damages, and other remedies in antitrust and intellectual property disputes. Dr. Heeb has written, consulted, and testified on a range of issues related to the application of economic and econometric analyses in a variety of industries, including software, computer hardware, telecommunications, commodities and financial markets, biopharmaceuticals, electricity, natural gas, and gaming.

Since 2019, Dr. Heeb has been recognized as a leading competition economist by Global Competition Review in Who's Who Legal - Competition. He has previously held various academic posts in the United States and Europe and was most recently a Senior Faculty Fellow at the Yale School of Management. He has served private sector clients and public authorities operating in both regulated and unregulated markets, and he has taught antitrust compliance to executives in North America, Europe, and Asia.

Prior to joining FTI Consulting, Dr. Heeb was an Equity Partner at Bates White Economic Consulting, where he was the leader of the Intellectual Property Practice and co-leader of the Antitrust and Competition Practice. He has testified extensively in matters before US state and federal courts, Canadian courts, arbitration panels, the US Copyright Royalty Board and the US Federal Energy Regulatory Commission. He has presented economic analyses on behalf of clients to the staffs of the US Federal Trade Commission, the US Department of Justice, the Competition Bureau of Canada, the European Commission's DG Comp, the Korean Fair Trade Commission, and the Japanese Fair Trade Commission.

Relevant Experience

— Testified before the Tax Court of Canada in several cases on the measure of skill versus chance in online and tournament poker.

— Testified before the Federal Court of Canada on reasonable royalties in *Seedlings v Pfizer Canada*.

— Testified before a jury in the US District Court of Delaware on reasonable royalty damages on behalf of Amgen in a biopharmaceutical patent dispute.

— Submitted an expert report on patent damages related to gene therapy technology in REGENXBIO v. Aldevron.

— Submitted expert reports in *Reorganized FLI, Inc. v. The Williams Companies, Inc. and Dynegy Marketing & Trade* related to allegations of price manipulation in natural gas markets.

— Submitted an expert report on damages and testified before an arbitrator in *In re Packaged Seafood Products Antitrust Litigation* related to allegations of price fixing in the market for canned tuna.

— Testified for NOVA Chemical Company before the Federal Court of Canada on reasonable royalties and patent damages issues in *Dow v. NOVA*.

— Submitted an expert report on monopolization and patent misuse issues in *ChromaDex v. Elysium Health*.

— In *In re Western States Wholesale Natural Gas Antitrust Litigation*, submitted multiple expert reports and declarations on behalf of energy trading companies alleged to have violated Section I of the Sherman Act, on issues related to class certification, liability, and damages.

— In I*n re Natural Gas Commodity Litigation*, submitted expert testimony on behalf of Coral Energy Resources, an energy trading company, related to allegations of collusion and price manipulation in the NYMEX commodity futures market.

— Testified to an arbitration panel on behalf of Activist in *Activist v. Phoenix*, a trade secrets dispute in the residential mortgage-backed securities industry.

— Served as lead economics consulting expert on behalf of AMD in the landmark microprocessor antitrust case AMD v. Intel. Led the consulting teams supporting three testifying experts and supervised all economics-related contributions. Advised on overall case strategy and performed economic analysis to assess liability and damages resulting from alleged illegal conduct in the United States, Japan, Korea, and Europe.

— Submitted written direct testimony before the Copyright Royalty Board in *In re Distribution of Satellite Royalty Funds*.

— Submitted an expert report on damages in *MCQ v. Idaho Pizza Company*, a dispute involving intellectual property licensing in the franchise restaurant business.

— Provided expert testimony on behalf of Tata Consultancy Services Limited on damages issues in a contract dispute over the implementation of an SAP Enterprise Resource Planning system for a global law firm.

— Served as lead economics consulting expert on behalf of several plaintiff companies in the Butadiene Rubber (BR)/Emulsion Styrene Butadiene Rubber (ESBR) case, which was argued before the English High Court.

— Provided economic expert services to the complainants in a steel industry trade dispute before the US International Trade Commission.

— Testified to an arbitration panel in an intellectual property and trade secrets dispute on behalf of Scentsy, Inc.

— Submitted an expert report on behalf of Central Valle Hermoso, S.A. de C.V. in an international arbitration under the rules of the ICC, in a dispute involving a natural gas supply agreement.

— In Certain Electronic Devices, Including Wireless Communication Devices, Tablet Computers, Media Players and Televisions, and Components Thereof and Certain Wireless Devices with 3G and/or 4G Capabilities and

Components Thereof, two related ITC investigations involving standard-essential patents (SEPs), served as lead consulting economist.

- Testified before Judge Glazer at the Federal Energy Regulatory Commission on behalf of Shell Energy North America on issues related to allegations of natural gas price misreporting.
- Submitted expert reports and testified before the court in *United States v. Dicristina* regarding econometric and game theoretical evidence on the question of whether poker is a game predominated by skill or chance. Judge Weinstein cited the testimony extensively in his decision.
- Submitted an affidavit in *Cohen v. Minister of Citizenship and Immigration* regarding econometric and game theoretical evidence on the question of whether poker is predominately a game of skill or chance. Judge Harrington cited the affidavit favorably in his decision.
- Submitted expert testimony on damages on behalf of the defendant in a dispute over alleged natural gas and financial derivatives price manipulation in *E. & J. Gallo Winery v. EnCana Corporation*.
- Testimony in a bench trial on the question of whether poker is a game of skill or chance in *Minnesota v. Jerde*, No. 60-CR-12-1715, was cited favorably by Judge Remick in his decision.
- Retained to testify before an arbitration panel on damages for an international seed company, the plaintiff in a patent dispute over licensing of genetic traits for herbicide tolerance. The matter settled prior to testimony.
- Developed damages estimates for mediation in an antitrust and intellectual property dispute in the heavy equipment industry involving issues of bundled pricing and exclusive dealing.
- Lead consulting expert to an international seed company advising on damages and settlement strategy in a defense matter involving licensing of genetic traits for herbicide tolerance before a US District Court.
- Served as lead consulting expert for SAP, defending a patent infringement suit in *Sky Technologies LLC v. SAP AG*.
- Served as lead consulting economist in a matter alleging trade secret misappropriation and antitrust counterclaims of tying, exclusive dealing, and attempted monopolization in the property management software market.
- Led the external economic team supporting the Competition Bureau of Canada's evaluation of the merger of Maple Acquisition Group and the parent company of the Toronto Stock Exchange.
- Retained to submit an expert report on damages for a defendant computer manufacturer in an intellectual property dispute involving component patents. The matter settled prior to testimony.
- Served as lead consulting expert for Amgen, Inc., on issues related to a request for permanent injunction in the patent infringement suit Teva v. Amgen.
- Provided economic analysis to the Competition Bureau of Canada in its evaluation of the acquisition of Maple Leaf Sports Entertainment by Bell Canada Enterprises Inc. and Rogers Communications, Inc.
- Led the economics team providing advice to the Competition Bureau of Canada in its evaluation of the acquisition of Potash Corporation by BHP Billiton.
- Provided economic analysis on behalf of tire manufacturers in the UK proceedings regarding private damages claims related to the EU synthetic rubber cartel case. Supported testifying expert and worked with attorneys on both sides of the Atlantic to quantify potential damages.
- Led a joint US–European consulting team providing support to a leading firm in the freight forwarding industry to address inquiries from antitrust authorities in a number of jurisdictions throughout the world, including the European Commission and the US Department of Justice, related to allegations of price-fixing and other anticompetitive conduct.

— Led the economics team supporting an expert testifying on behalf of Music Choice before the Copyright Royalty Board of the US Library of Congress.

— Estimated damages related to allegations of natural gas price manipulation, and provided advice as a consulting expert.

— Served as Scientist-in-Charge (principal investigator) of a European Union–funded research study of the economics of network industries.

— Provided economic analysis to New England Power Service Company supporting both the planning and the divestiture of the Seabrook nuclear power station.

— Developed electric utility resource planning and asset valuation methodology and software that was implemented in six states and used by federal government researchers.

— Developed a simulation model to calibrate electricity forecasting and planning methodologies to variations in weather.

— Provided advice to multiple defendants as a consulting expert in support of successful settlement negotiations in a number of state indirect purchaser cases in matters involving allegations of physical natural gas price manipulation.

— Retained as an expert by an energy trading company in a case involving allegations of securities market manipulation in the propane industry.

— Designed and implemented short-term econometric forecasting methodology that is widely used to support trading in deregulated electricity markets.

Testifying Experience

— ***Rovi Guides, Inc. and TiVo LLC*** *v. BCE Inc. et al.*, No. T-1184-21 (Canada Federal Court, 2022). Affidavit filed, November 3, 2022; cross-examination, November 17, 2022.

— *Core Orientation Systems, Products Containing Core Orientation Systems, Components thereof, and Methods of Using the Same*, No. 337-TA-1309, (U.S. International Trade Commission). Rebuttal expert report, September 28, 2022; deposition October 5, 2022; testimony November 2, 2022. [**On behalf of Boart Longyear**]

— ***Jessica Jones et al.*** *v. Varsity Brands et al.*, Case No 2 :20-cv-02892-SHL-tmp, (W.D. Tennessee Western Division). Expert report, June 20, 2022.

— ***REGENXBIO Inc., and The Trustees of the University of Pennsylvania*** *v. Aldevron LLC*, Case No. 3:20-CV-00171-PDW-ARS, (D. North Dakota Eastern Division). Expert report, February 15, 2022; erratum expert report, February 28, 2022; deposition, April 19, 2022.

— *Reorganized FLI, Inc. v.* ***The Williams Companies, Inc. and Dynegy Marketing & Trade***, Case No. 2:05-cv-02389-JAR-GEB, (D. Kansas). Expert report, October 15, 2021. Supplemental expert report, December 17, 2021.

— *Bérubé v.* ***Her Majesty the Queen***, Files: 2014-461(IT)G 2014-123(IT)G, (Tax Court of Canada). Expert report, August 21, 2020; Second expert report, September 11, 2020; Rebuttal report, November 25, 2020; Surrebuttal report, July 14, 2021; Trial testimony, September 22, 2021.

— *D'Auteuil v.* ***Her Majesty the Queen***, 2014-1171(IT)G 2014-90(IT)G, (Tax Court of Canada). Expert report, August 21, 2020; Second expert report, September 11, 2020; Rebuttal report, November 25, 2020; Surrebuttal report, July 14, 2021; Trial testimony, September 22, 2021.

— *Giguère v.* ***Her Majesty the Queen***, 2014-1787(IT)G 2014-1786(IT)G, (Tax Court of Canada). Expert report, August 21, 2020; Second expert report, September 8, 2020; Rebuttal report, November 25, 2020; Surrebuttal report, July 14, 2021; Trial testimony, September 22, 2021.

— *Duhamel v.* ***Her Majesty the Queen***, Files: 2018-1782 (IT)G, (Tax Court of Canada). Expert report, December 16, 2020; Rebuttal report, January 19, 2021; Surrebuttal report, February 18, 2021. Trial testimony, November 22-23, 2021.

— *In re Packaged Seafood Products Antitrust Litigation*, Case No. 15-MD-2670-JLS-MDD (S.D. California). Expert report, May 10, 2019; deposition, June 7, 2019; arbitration testimony, January 22, 2020. [**On behalf of Defendant Tri-Union Seafood LLC d/b/a Chicken of the Sea International and Thai Union Group**]

— ***ChromaDex, Inc.,*** *v. Elysium Health, Inc.*, Case No. SACV 16-02277-CJC (DFMx), (C.D. California). Expert report July 26, 2019, deposition August 14, 2019.

— ***Seedlings Life Science Ventures LLC*** *v. Pfizer Canada Inc*., No. T-608-17 (Canada Federal Court). Expert report, May 29, 2019, trial testimony October 24-25, 2019.

— *In re Distribution of Satellite Royalty Funds*, No. 14-CRB-0011-SD (2010-13). Written direct testimony, Mar. 22, 2019; corrected written direct testimony, June 6, 2019; rebuttal testimony, August 26, 2019, corrected rebuttal testimony October 14, 2019. [**On behalf of Broadcasters Complainant Group**.]

— ***Central Valle de Hermoso, S.A. de C.V.*** *v BNP Paribas*, International arbitration under rules of the ICC. Expert report, February 8, 2018.

— ***Amgen Inc.*** *v. Hospira Inc*., Case No. 15-cv-839-RGA (D. Delaware). Expert report, February 3, 2017; reply report, April 13, 2017; deposition, April 28, 2017; jury testimony, September 19, 2017.

— *Los Angeles Turf Club, et al. v.* ***Horse Racing Labs, LLC****, et al.*, Case No. 2:15-cv-9332 (C.D. Cal). Expert report, March 8, 2017, corrected expert report, March 15, 2017; declaration April 20, 2017; deposition May 10, 2017.

— *The Dow Chemical Company v.* ***NOVA Chemicals Corporation***, No. T-2051-10 (Canada Federal Court, 2011). Expert report, September 26, 2016; reply report, November 30, 2016; testimony, December 15–16, 2016, January 11, 2017.

— *In re Western States Wholesale Natural Gas Antitrust Litigation*, MDL-1566, Base Case No. CV-S-2:03-1431-RCJ-PAL, Case Nos. CV-S-03-1431-RCJ-PAL, CV-S-06-233-RCJ-PAL, CV-S-07-987-RCJ-PAL, CV-S-07-1019-RCJ-PAL, CV-S-09-00915-RCJ-PAL (D. Nevada). Declaration, June 23, 2016; deposition, August 1, 2016; expert report, September 12, 2016; rebuttal declaration, November 3, 2016; deposition, March 21, 2017. [**On behalf of defendants: ONEOK, Inc.; ONEOK Energy Marketing & Trading Co., L.P.; The Williams Companies, Inc.; Williams Merchant Services Company, Inc.; Williams Energy Marketing & Trading Company; American Electric Power Company, Inc.; AEP Energy Services, Inc.; Duke Energy Corporation; Duke Energy Trading And Marketing, LLC; Dynegy Marketing and Trade; El Paso Corporation; El Paso Merchant Energy, L.P.; CMS Energy Corporation; CMS Marketing Services & Trading Company; CMS Field Services; Reliant Energy, Inc.; Reliant Energy Services, Inc.; Coral Energy Resources, L.P.; Xcel Energy, Inc.; Eprime, Inc.**]

— *Sinclair Oil Corporation v.* ***ONEOK Energy Services Company, L.P***., MDL-1566, Base Case No. CV-S-2:03-1431-RCJ-PAL. Case No. 2:06-CV-0282-RCJ-PAL. (D. Nevada). Expert report, September 12, 2016.

— *Baker and McKenzie Global Services LLC v.* ***Tata America International Corp.*** (AAA Case No. 01-14-0000-0618). Expert report, January 15, 2016; deposition, February 19, 2016; testimony, April 27, 2016.

— Public Utils. Comm'n of the State of Cal. v. Sellers of Long-Term Contracts to the Cal. Dep't of Water Res. and California Elec. Oversight Board v. Sellers of Energy & Capacity Under Long-Term Contracts with the Cal. Dep't of Water Res., Nos. EL02-60-007 and EL02-62-006 (FERC). Answering testimony, July 21, 2015; deposition, September 22, 2015; cross-examination testimony, November 24, 2015. [**On behalf of Shell PLC**]

— ***Activist Special Advisory Services LLC*** *v. Phoenix Real Estate Solutions Ltd*. (AAA Case No. 011400002627). Expert report, February 19, 2015; testimony before arbitration panel, February 25, 2015.

— *Marosvari v.* ***Scentsy, Inc.***, No. CV OC 1210673 (Arbitration ordered by Idaho Dist. Ct., Ada Cnty). Expert report, November 17, 2014; deposition, December 5, 2014; testimony before arbitration panel, December 17, 2014.

— *Minnesota v.* ***Jerde***, No. 60-CR-12-1715 (Minn. Dist. Ct., Polk Cnty. filed 2012). Declaration, October 17, 2014; oral testimony in bench trial, November 6, 2014.

— *Minnesota v.* ***Johnson***, No. 60-CR-12-1713 (Minn. Dist. Ct., Polk Cnty. filed 2012). Declaration, October 17, 2014.

— ***Cohen*** *v. Minister of Citizenship and Immigration*, No. IMM-7846-14 (Can. Fed. Ct.). Affidavit, December 11, 2013.

— *Kentucky v.* ***Pocket Kings***, No. 10-CI-0505 (Ky. Cir. Ct., Franklin Cnty. Mar. 25, 2010). Affidavit, September 24, 2012.

— *United States v.* ***Dicristina***, No. 11-CR-414 (E.D.N.Y. June 1, 2011). Expert report, July 5, 2012; oral testimony in bench trial, July 9, 2012, August 10, 2012; supplemental expert report, August 13, 2012; declaration, August 20, 2012.

— ***MCQ*** *v. Idaho Pizza Co., Inc.*, No. CV OC 1025077 (D. Idaho, Dec. 22, 2010). Expert report, July 11, 2011.

— *E. & J. Gallo Winery v.* ***EnCana Corp.***, No. CV F 03-5412 (E.D. Cal. Sept. 30, 2005). Expert report, April 1, 2009; deposition, April 2009.

— *In re Natural Gas Commodity Litig*., No. 03 CV 6186 (S.D.N.Y. Oct. 14, 2004). Expert report, December 5, 2006. [**On behalf of Defendant Coral Energy Resources**.]

Publications and Working Papers

— "A Framework for the Economic Analysis of Exclusionary Conduct" (with B. Douglas Bernheim). In *Oxford Handbook of International Antitrust Economics*. Vol. II, edited by Roger D. Blair and D. Daniel Sokol, 2015.

— "Cartels as Two-Stage Mechanisms: Implications for the Analysis of Dominant-Firm Conduct" (with Leslie M. Marx, William E. Kovacic, and Robert C. Marshall). *Chicago Journal of International Law* 10, no. 1 (2009): 213–31.

— "Innovation and Vertical Integration in Complementary Markets" *Journal of Economics and Management Strategy* 12, no. 3, (2003): 387–417.

— "The Hidden Gender Restriction: The Need for Proper Gender Controls When Testing for Racial Discrimination" (with Alexander Cavallo and Hazem El-Abbadi). In *Intelligence, Genes, & Success*, edited by Bernie Devlin, Stephen E. Fienberg, Daniel P. Resnick, and Kathryn Roeder, 193–214. New York: Springer-Verlag, 1997.

— "Effects of State Regulation on Childcare Prices and Choices" (with Rebecca Kilburn). RAND working paper, 2004.

— "Catching up in Quality." INSEAD working paper, 2002.

— "Optimal Differentiation." INSEAD working paper, 2002.

ATTACHMENT 2:
MATERIALS RELIED ON

Attachment 2

I incorporate by reference any citation that appears in footnotes in this report including the tables and references therein. I have access to all documents produced and depositions taken in this litigation.

Legal Filings

- Complaint
- Brown Shoe Co. v. United States, 370 U.S. 294 (1962)
- Cont'l Ore Co. v. Union Carbide & Carbon Corp., 370 U.S. 690, 698–99 (1962)
- Conwood Co., L.P. v. U.S. Tobacco Co., 290 F.3d 768 at -783 (6th Cir. 2002)
- 580 U.S. _____ (2017)
- Complaint, Jane Doe 1 et al. vs. Varsity Brands, LLC, et al. (D.S.D., Greenville Division) , Sept. 1, 2022
- First Amended Complaint, Jane Doe 1 et al. vs. Varsity Brands, LLC, et al. (D.S.D., Greenville Division), Sept. 15, 2022
- Complaint, Mary Doe vs. Varsity Brands, LLC, et al. (W.D. Tenn., Western Division) , Sept. 26, 2022
- Complaint, John Doe 1 vs. Varsity Brands, LLC, et al. (E.D.N.C., Raleigh Division), Oct. 26, 2022
- Complaint, Jane Doe 1 vs. Varsity Brands, LLC, et al. (M.D. Fla., Orlando Division), Nov. 17, 2022
- Complaint, Jane Doe 2 vs. Varsity Brands, LLC, et al. (M.D. Fla., Orlando Division), Nov. 18, 2022
- Complaint, Jane Doe 3 vs. Varsity Brands, LLC, et al. (M.D. Fla., Orlando Division), Nov. 1, 2022
- United States v. E. I. du Pont De Nemours & Co., 351 U.S. 377 (1956)

Depositions

- Deposition and Exhibits of Brian Elza, November 16, 2021 and November 17, 2021
- Deposition and Exhibits of Tres LeTard, November 22, 2021
- Deposition and Exhibits of Sarah Minzghor, December 17, 2021
- Deposition and Exhibits of Alexa Bray, January 11, 2022
- Deposition and Exhibits of Jamie Parrish, March 3, 2022 and March 17, 2022
- Deposition and Exhibits of Steve Peterson, March 9, 2022
- Deposition and Exhibits of Pashupati Nangia, March 10, 2022
- Deposition and Exhibits of Jim Hill, March 21, 2022
- Deposition and Exhibits of John Sadlow, April 7, 2022
- Deposition and Exhibits of Jim Chadwick, April 15, 2022
- Deposition and Exhibits of David Hanberry, April 18, 2022
- Deposition and Exhibits of Jeff Webb, May 12, 2022
- Deposition and Exhibits of Kevin Murphy, November 3, 2022 and November 4, 2022

Academic

- Bernheim, B. Douglas, and Randal Heeb. "A framework for the economic analysis of exclusionary conduct." The Oxford Handbook of International Antitrust Economics: Vol. II (2014): 3-39
- Frank Benford, "The Law of Anomalous Numbers," Proceedings of the American Philosophical Society, Vol. 79, No. 4
- Greenlee, Patrick, David Reitman, and David S. Sibley. "An antitrust analysis of bundled loyalty discounts." International Journal of Industrial Organization 26:5, 1132-1152 (2008)
- Ho, Katherine, Justin Ho, and Julie Holland Mortimer. "The use of full-line forcing contracts in the video rental industry," American Economic Review 102:2, 686-719 (2012)
- Jonathan Baker, "Stepping out in an Old Brown Shoe: In Qualified Praise of Submarkets," Antitrust Law Journal, (2000). Vol 68. p. 207
- O'Brien, Daniel P., and Greg Shaffer. "Vertical control with bilateral contracts," The RAND Journal of Economics 23:3, 299-308 (1992)
- Schwartz, Marius, and Daniel R. Vincent. "The no surcharge rule and card user rebates: Vertical control by a payment network," Review of Network Economics 5:1, 72-102 (2006)
- Theodore P. Hill, "A Statistical Derivation of the Significant-Digit Law," Statistical Science, Vol. 10, No. 4, 1995

Expert Reports

- Expert Report of Randal Heeb, PhD (June 20, 022)
- Expert Report of Kevin Murphy, PhD (September 23, 2022)
- Expert Report of Jonathan Orszag, PhD (September 23, 2022)

Bates-Stamped Documents

- CB00485513
- JEFF00000019
- JEFF00047202
- NFINITY000069
- NFINITY000071
- NFINITY000088
- NFINITY000297
- USASF_00000297
- USASF_00015124 (Peterson Exhibit 33)
- USASF_00055706
- VAR00007743
- VAR00009293
- VAR00017807
- VAR00017827
- VAR00020214
- VAR00032440
- VAR00067447

- VAR00076749
- VAR00078751 (Elza Exhibit 15)
- VAR00080966
- VAR00081049
- VAR00081435 (Hill Exhibit 11)
- VAR00081770
- VAR00083611 (Sadlow Exhibit 4)
- VAR00083645
- VAR00100695
- VAR00101102
- VAR00101102
- VAR00123779
- VAR00124047
- VAR00128717
- VAR00129039
- VAR00153399
- VAR00160802 (Duhon Exhibit 5)
- VAR00160803
- VAR00173102
- VAR00182095 (Elza Exhibit 26)
- VAR00190278 (Hill Exhibit 10)
- VAR00195096
- VAR00195098
- VAR00201278
- VAR00228394
- VAR00229759 (Parrish Exhibit 20)
- VAR00239859
- VAR00247460
- VAR00249288
- VAR00259313
- VAR00272717
- VAR00275899
- VAR00310631
- VAR00318421 (Hill Exhibit 6)
- VAR00318601 (Hill Exhibit 5)
- VAR00318604
- VAR00320716 (Hill Exhibit 7)
- VAR00320890 (LeTard Exhibit 22)
- VAR00324040 (Hill Exhibit 8)
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- VAR00346901
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VAR00352201
VAR00352202
VAR00352218
VAR00352219
VAR00352220
VAR00352221
VAR00352222
VAR00352223
VAR00352224
VAR00352225
VAR00439290
VAR00439291
VAR00462074
VAR00462075
VAR00462076
VAR00462077
VAR00462078
VAR00462079
Varsity Schools Registration Data
VAR00462074
VAR00462075
VAR00462076
VAR00462077
VAR00462078
VAR00462079

Varsity Camps Registration Data
VAR00462074
VAR00462075
VAR00462076
VAR00462077
VAR00462078
VAR00462079

Varsity Apparel Data
VAR00604800
VAR00604801
VAR00604802
VAR00604803
VAR00604804
VAR00604805

GL Data
VAR00117735
VAR00117736
VAR00117737
VAR00117738
VAR00117739
VAR00117740
VAR00352085
VAR00352086

World Bids Events Data
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USASF_00002782
USASF_00002785
USASF_00052537
USASF_00066898
USASF_00068486
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VAR00127208
VAR00234212
VAR00513660
VAR00017306
VAR00018967
CB00063214
VAR00582534
VAR00445395
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ATTACHMENT 3:
VARSITY'S ACQUISITIONS OF RIVAL EVENT PRODUCERS, 2004 – 2012

Attachment 3

654. Table 32 summarizes Varsity's acquisitions of 19 rival event producers from 2004-2018, including 11 acquisitions from 2004-2012 (analyzed below) and the eight acquisitions from 2014-2018 that I previously analyzed in my first report.[678]

655. Table 33 summarizes the 27 World Bids Events that Varsity acquired with its 19 acquisitions of rival event producers from 2004-2018, including the 12 World Bids Events acquired with its 11 acquisitions from 2004-2012 and the 15 World Bids Events acquired with the eight acquisitions from 2014-2018. Below I summarize Varsity's acquisitions of 11 rival event producers from 2004-2012.

656. **National Spirit Group:** Varsity acquired National Spirit Group (NSG) on February 12, 2004.[679] At the time, NSG was Varsity's "biggest rival."[680] Prior to the NSG acquisition in 2002, Varsity reported $93.8 million USD in revenue from uniforms and accessories and $62.6 million USD from camps and events. Following the NSG acquisition in 2004, Varsity reported $131.1 million USD in revenue from uniforms and accessories and $103.4 million USD in revenue from camps and events.[681] Varsity describes the National Cheerleaders Association (NCA, a subsidiary of NSG) as the first organization to host an All-Star competition in 1987.[682] Varsity further states that the NCA All-Star National Championship (a World Bids Event) is the largest and most prestigious of World Bids Events.[683]

657. **Athletic Championships:** Varsity acquired Athletic Championships (ATH) on June 27, 2005.[684] At the time of the acquisition, ATH operated 14 competitions in 11 states.[685] Along with its acquisition of ATH, Varsity also acquired ATH's World Bids Event, the Athletic Championships hosted in Providence, Rhode Island. Varsity due diligence documents state

[678] Heeb Report, Table 15, Table 16, ¶¶ 234-250.
[679] VAR00129039, at -039.
[680] Memphis Business Journal, "Varsity Brands acquires Athletic Championships and Premier Athletics," July 6, 2005, accessed on Nov. 15, 2022, available at: https://www.bizjournals.com/memphis/stories/2005/07/04/daily16.html.
[681] JEFF00047202, at -260.
[682] Varsity, "National Cheerleaders Association," accessed on Nov. 15, 2022, available at: https://www.varsity.com/all-star/competitions/brands/#national-cheerleaders-association.
[683] Ibid.
[684] VAR00129039, at -039.
[685] Memphis Business Journal, "Varsity Brands acquires Athletic Championships and Premier Athletics," July 6, 2005, accessed on Nov. 15, 2022, available at: https://www.bizjournals.com/memphis/stories/2005/07/04/daily16.html.

that Varsity intentionally looked to acquire Tier 1 event companies with World Bids Events, such as ATH.[686]

658. **World Spirit Federation:** Varsity acquired World Spirit Federation (WSF) on July 1, 2006.[687] The acquisition of WSF gave Varsity an East Coast presence, which was a region they formerly had a weak presence in.[688] This strategy to expand its market share in certain regions and gain stronger event coverage nationwide are the stated reasons for the WSF acquisition in Varsity due diligence documents.[689] Varsity also acquired two World Bids Events with its acquisition of WSF.

659. **Spirit Team Cheer & Dance:** Varsity acquired Spirit Team Cheer & Dance (Spirit Team) on October 2, 2006.[690] The event producer, The American Championships, operated by Spirit Team, was specifically mentioned in Varsity due diligence documents as the type of All-Star event company that Varsity was targeting for acquisition.[691] With the acquisition, Varsity also acquired Spirit Team's World Bids Event.

660. **Spirit Sports:** Varsity acquired Spirit Sports on November 8, 2006.[692] With this acquisition, Varsity acquired one World Bids Event.

661. **American Cheer Power:** Varsity acquired American Cheer Power (ACP) on January 8, 2008.[693] The acquisition gave Varsity "a much larger presence with small gyms."[694] Along with the acquisition of ACP, Varsity also acquired ACP's World Bids Event.

662. **Spirit Xpress Cheerleading & All Star Challenge:** Varsity acquired Spirit Xpress Cheerleading & All Star Challenge (Spirit Xpress) on April 15, 2008.[695] Varsity acquired a World Bids Event when acquiring Spirit Xpress.

663. **Spirit Cheer:** Varsity acquired Spirit Cheer on October 24, 2008.[696] A reason for the acquisition is that "Spirit Cheer has a unique relationship with the NBA, which Varsity can

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686 VAR00259313, at -317.
687 VAR00129039, at -039.
688 Spirit Post, "Varsity Acquisitions: A Recap," accessed on Nov. 15, 2022, available at https://spiritpost.com/2008/11/varsity-acquisitions-a-recap/.
689 VAR00259313, at -318.
690 VAR00259313, at -317.
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692 VAR00129039, at -039.
693 VAR00129039, at -039.
694 Spirit Post, "Varsity Acquisitions: A Recap," accessed on Nov. 15, 2022, available at https://spiritpost.com/2008/11/varsity-acquisitions-a-recap/.
695 VAR00129039, at -039.
696 VAR00129038, at -040.

expand."[697] Varsity acquired a World Bids Event from Spirit Cheer.

664. **Spirit Festival:** Varsity acquired Spirit Festival on August 17, 2011.[698] Varsity also acquired a World Bids Event from Spirit Festival.

665. **Pac West:** Varsity acquired Pac West on December 15, 2011.[699] Varsity states that "Pac West is credited for pioneering All Star competitive cheer in the Pacific Northwest."[700] Varsity also acquired a World Bids Event from Pac West.

666. **Spirit Holding:** Varsity acquired 51% of Spirit Holding on December 20, 2012. Varsity previously owned 49% of Spirit Holding and thus this transaction gave Varsity full ownership of Spirit Holding.[701] Spirit Holding included subsidiaries CheerSport Corporation, which "owns and operates Atlanta competition and over 20 other competitions in USA"[702]; subsidiary Universal Spirit Association, Inc., which "has cheerleader competitions and summer cheerleader camps in NC, SC, and VA"[703]; and subsidiary CheerLogistics, Inc., which provided "support services for Universal Spirit Association, Inc. and CheerSport Corporation."[704] Varsity acquired Spirit Holding for "bout $6mm."[705] At the time of the acquisition, Varsity estimated that CheerSport Corporation and Universal Spirit Association, Inc, had $6 million in revenue and 8.7% of the All Star business market share.[706] Varsity acquired a World Bids Event from its acquisition of Spirit Holding.

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[697] Spirit Post, "Varsity Acquisitions: A Recap," accessed on Nov. 15, 2022, available at https://spiritpost.com/2008/11/varsity-acquisitions-a-recap/.
[698] VAR00129038, at -040.
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[701] VAR00129038, at -040.
[702] Ibid.
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ATTACHMENT 4:
TABLES AND FIGURES

HIGHLY CONFIDENTIAL PURSUANT TO PROTECTIVE ORDER

Table 1. Varsity Increased Real Prices for Acquired Brand Events

Brand	Acquisition Date	From	To	Number of Events	Real Price Change
ALO	12/15/2016	2016-2017	2017-2018	15	12.2%
		2017-2018	2018-2019	11	-0.6%
		2018-2019	2019-2020	7	4.2%
ATC	4/21/2017	2016-2017	2017-2018	2	43.2%
		2017-2018	2018-2019	2	-2.0%
		2018-2019	2019-2020	2	11.5%
CSG	11/15/2017	2015-2016	2018-2019	7	52.0%
		2017-2018	2019-2020	5	-0.1%
EPIC	1/19/2018	2015-2016	2018-2019	51	15.1%
		2017-2018	2019-2020	23	4.7%
JF	11/2/2015	2013-2014	2016-2017	42	23.9%
		2015-2016	2017-2018	41	-1.7%
		2016-2017	2018-2019	40	-0.1%
		2017-2018	2019-2020	32	1.7%
MGS	12/1/2017	2017-2018	2018-2019	6	30.6%
		2018-2019	2019-2020	6	5.7%
SCB	2/28/2017	2016	2017-2018	9	46.9%
		2017-2018	2018-2019	9	1.7%
		2018-2019	2019-2020	7	-5.5%
All 7		**Prior to Acq.**	**Post Acq.**	**132**	**23.8%**

Sources: Varsity Registration Data; Pre-Acquisition Data.

Notes: The prices before and after acquisition are weighted by athlete count. Rows highlighted in blue indicate the first season post-acquisition in which Varsity had pricing control.
The price changes are real price changes.

Table 2. Varsity's Event Count Market Share for World Bids Events, 2012-2013 Season Through 2019-2020 Season

Season	Varsity Events	Total Events	Varsity Event Share
2012-2013	12	34	35.3%
2013-2014	16	42	38.1%
2014-2015	18	42	42.9%
2015-2016	23	42	54.8%
2016-2017	23	42	54.8%
2017-2018	32	42	76.2%
2018-2019	33	42	78.6%
2019-2020	33	42	78.6%

Sources: Varsity Registration Data; World Bids Events Data.

Table 3. Varsity's Event Count Market Share of All-Star Events, 2015-2016 Season Through 2018-2019 Season

Season	Varsity Events Based on End of Season Ownership	USASF Sanctioned Events	Event Count Market Share of All-Star Events
2015-2016	343	809	42.4%
2016-2017	375	945	39.7%
2017-2018	467	831	56.2%
2018-2019	474	745	63.6%

Sources: Varsity Registration Data; USASF_00000297, at -297.

Notes: Varsity acquired JamBrands in November 2015, so all JamBrands brand events in the 2015-2016 season are included in Varsity's postseason market share of 42.4% in the 2015-2016 season. Varsity acquired Aloha in December 2016, Spirit Celebration (SCB) in February 2017, and All Things Cheer (ATC) in April 2017, so all Aloha/SCB/ATC brand events in the 2016-2017 season are included in Varsity's postseason market share of 39.7% in the 2016-2017 season. Varsity acquired Champion Spirit (CSG) in November 2017, Mardi Gras Spirit (MGS) in December 2017, and EPIC in January 2018, so all CSG/MGS/EPIC brand events in the 2017-2018 season are included in Varsity's postseason market share of 56.2% in the 2017-2018 season.

Varsity Registration Data does not contain registration records for JamBrands for the 2015-2016 season, for Aloha/SCB/ATC for the 2016-2017 season, and for CSG/EPIC for the 2017-2018 season (all seasons of acquisition). I estimate the number of events for these brands in each brand's season of acquisition from the number of events operated by Varsity under that brand in the following season. For example, the count of JamBrands events for 2015-2016 season is estimated by the number of JamBrands events in the 2016-2017 season. This estimation undercounts the number of acquired brand events in the season of acquisition, because Varsity eliminated many of the brand events that it acquired in its first season of pricing control but would have kept those events on the schedule during the season of acquisition. See Table 37.

HIGHLY CONFIDENTIAL PURSUANT TO PROTECTIVE ORDER

Table 4. Varsity's Revenue Market Share of All-Star Events, Fixed at September 2016 Revenue Values and Including Acquisitions Through January 2018

All Star Event Companies	Revenue	% of Market
Varsity All Star Events	$ 103,420,000.00	75.2%
Varsity acquired GSSA/Aloha (12/15/2016)	$ 3,200,000.00	2.3%
Varsity All Star Events (as of 12/15/2016)	$ 106,620,000.00	77.5%
Varsity acquired Spirit Celebration (2/28/2017)	$ 2,200,000.00	1.6%
Varsity All Star Events (as of 2/28/2017)	$ 108,820,000.00	79.1%
Varsity acquired All Things Cheer (4/21/2017)	$ 650,000.00	0.5%
Varsity All Star Events (as of 4/21/2017)	$ 109,470,000.00	79.6%
Varsity acquired Champion Spirit Group (11/15/2017)	$ 2,500,000.00	1.8%
Varsity All Star Events (as of 11/15/2017)	$ 111,970,000.00	81.4%
Varsity acquired Mardi Gras Spirit (12/1/2017)	$ 550,000.00	0.4%
Varsity All Star Events (as of 12/1/2017)	$ 112,520,000.00	81.8%
Varsity acquired EPIC (1/19/2018)	$ 8,000,000.00	5.8%
Varsity All Star Events (as of 1/19/2018)	$ 120,520,000.00	87.6%

Sources: VAR00101102.

Notes: The table formatting and structure is identical to the original company market research document, which (according to its metadata) was last modified by Tres Letard on September 16, 2016. The table includes revenue from the "List of Companies" tab in VAR00101102 for two companies: All Things Cheer and Mardi Gras Spirit.

HIGHLY CONFIDENTIAL PURSUANT TO PROTECTIVE ORDER

Table 5. All-Star Cheer Competition Customers Almost All Attended Acquired Brands Events or World Bids Events

Event Type Groups	Entrant Count in Class Period	Percentage of Total Entrants during Class Period	Registration Fees in Class Period	Percentage of Total Registration Fees during Class Period
Acquired Brands Events	1,554,424	93.9%	$262,929,342	94.1%
World Bids Events	1,528,525	92.4%	$265,045,172	94.8%
Acquired Brands or World Bids Events	1,632,346	98.7%	$276,763,039	99.0%

Sources: Varsity Registration Data; World Bids Events Data; Pre-Acquisition Data.

HIGHLY CONFIDENTIAL PURSUANT TO PROTECTIVE ORDER

Table 6. Fraction of Class Members in Cheer Competitions Markets that are Uninjured by Varsity's Conduct

Region	Season	Entrants in Share < 50% CSAs and No Apparel	Total Entrants	Fraction of Entrants in Share < 50% CSAs and No Apparel	Fees Paid by Entrants in Share < 50% CSAs and No Apparel	Total Fees Paid	Fraction of Fees Paid by Entrants in Share < 50% CSAs and No Apparel
MW	2016-2017	4,712	96,811	4.87%	$435,858	$10,604,187	4.11%
	2017-2018	5,002	96,029	5.21%	$387,488	$10,268,519	3.77%
	2018-2019	1,785	102,956	1.73%	$146,193	$11,293,197	1.29%
	2019-2020	1,053	77,579	1.36%	$88,351	$9,074,036	0.97%
NE	2016-2017	1,157	78,312	1.48%	$85,636	$8,498,829	1.01%
	2017-2018	626	91,992	0.68%	$45,703	$9,886,498	0.46%
	2018-2019	2,117	122,631	1.73%	$142,650	$12,757,020	1.12%
	2019-2020	803	74,613	1.08%	$54,002	$8,193,635	0.66%
SE	2016-2017	3,354	187,438	1.79%	$221,410	$48,531,230	0.46%
	2017-2018	2,478	199,816	1.24%	$170,961	$54,800,116	0.31%
	2018-2019	2,608	219,562	1.19%	$173,862	$59,962,810	0.29%
	2019-2020	2,004	125,682	1.59%	$150,951	$16,466,729	0.92%
SW	2016-2017	6,546	85,069	7.69%	$642,573	$9,102,353	7.06%
	2017-2018	1,578	102,830	1.53%	$150,446	$11,097,032	1.36%
	2018-2019	3,495	102,700	3.40%	$364,668	$11,616,861	3.14%
	2019-2020	1,762	81,483	2.16%	$188,638	$9,784,039	1.93%
W	2016-2017	5,781	75,714	7.64%	$580,170	$7,719,965	7.52%
	2017-2018	1,545	89,226	1.73%	$178,662	$9,502,125	1.88%
	2018-2019	691	89,880	0.77%	$69,404	$9,587,671	0.72%
	2019-2020	983	62,097	1.58%	$80,499	$6,593,125	1.22%
All Regions	**Class Period**	**50,080**	**2,162,420**	**2.32%**	**$4,358,123**	**$335,339,977**	**1.30%**

Sources: Varsity Registration Data; CSA/MSA Information and Populations.

HIGHLY CONFIDENTIAL PURSUANT TO PROTECTIVE ORDER

Table 7. Fraction of Class Members in Cheer Competitions Markets that are Uninjured by Varsity's Conduct (Accounting for Entrants in Multiple CSAs)

Region	Season	Entrants in Share < 50% CSAs and No Apparel	Total Entrants	Fraction of Entrants in Share < 50% CSAs and No Apparel	Fees Paid by Entrants in Share < 50% CSAs and No Apparel	Total Fees Paid	Fraction of Fees Paid by Entrants in Share < 50% CSAs and No Apparel
MW	2016-2017	1,218	96,811	1.26%	$106,619	$10,604,187	1.01%
	2017-2018	957	96,029	1.00%	$79,978	$10,268,519	0.78%
	2018-2019	215	102,956	0.21%	$15,647	$11,293,197	0.14%
	2019-2020	134	77,579	0.17%	$10,205	$9,074,036	0.11%
NE	2016-2017	231	78,312	0.29%	$19,141	$8,498,829	0.23%
	2017-2018	0	91,992	0.00%	$0	$9,886,498	0.00%
	2018-2019	84	122,631	0.07%	$5,996	$12,757,020	0.05%
	2019-2020	150	74,613	0.20%	$9,302	$8,193,635	0.11%
SE	2016-2017	562	187,438	0.30%	$27,477	$48,531,230	0.06%
	2017-2018	311	199,816	0.16%	$17,487	$54,800,116	0.03%
	2018-2019	159	219,562	0.07%	$7,401	$59,962,810	0.01%
	2019-2020	726	125,682	0.58%	$106,272	$16,466,729	0.65%
SW	2016-2017	3,769	85,069	4.43%	$326,337	$9,102,353	3.59%
	2017-2018	276	102,830	0.27%	$28,450	$11,097,032	0.26%
	2018-2019	253	102,700	0.25%	$30,919	$11,616,861	0.27%
	2019-2020	345	81,483	0.42%	$36,705	$9,784,039	0.38%
W	2016-2017	2,242	75,714	2.96%	$204,714	$7,719,965	2.65%
	2017-2018	198	89,226	0.22%	$21,567	$9,502,125	0.23%
	2018-2019	39	89,880	0.04%	$2,458	$9,587,671	0.03%
	2019-2020	409	62,097	0.66%	$29,185	$6,593,125	0.44%
All Regions	**Class Period**	**12,278**	**2,162,420**	**0.57%**	**$1,085,859**	**$335,339,977**	**0.32%**

Sources: Varsity Registration Data; CSA/MSA Information and Populations.

Table 8. School Teams and All-Star Teams Attended the Same Competitions at the Same Venues and Paid the Same Prices

Season	Competitions for only school teams	Competitions for both All-Star and school teams	Percentage of school competitions that are joint with school and All-Star teams	School entrants at competitions for only school teams	School entrants at competitions for both All-Star and school teams	Percentage of school entrants at All-Star and school joint competitions
2015-2016	32	98	75.4%	35,395	52,934	59.9%
2016-2017	35	91	72.2%	36,544	46,646	56.1%
2017-2018	37	83	69.2%	37,800	55,561	59.5%
2018-2019	39	79	66.9%	42,055	56,212	57.2%

Sources: Varsity Registration Data.

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Table 9. Fraction of Varsity's Cheer Camps Customers that Attended Camps in their Home Region

Year	Type of Camp	Revenue Share	Entrants		Registration Fees	
			Same Region	Different Region	Same Region	Different Region
2015	University Camp	52.3%	96%	4%	96%	4%
	Resort Camp	19.8%	94%	6%	95%	5%
	Home Camp	16.3%	87%	13%	87%	13%
	Hotel Camp	5.5%	96%	4%	96%	4%
	Day Camp	3.7%	90%	10%	90%	10%
	Clinic	1.8%	94%	6%	96%	4%
	Campground Camp	0.6%	100%	0%	100%	0%
2016	University Camp	50.0%	95%	5%	95%	5%
	Resort Camp	21.3%	94%	6%	95%	5%
	Home Camp	17.2%	86%	14%	86%	14%
	Hotel Camp	5.4%	96%	4%	96%	4%
	Day Camp	3.5%	89%	11%	89%	11%
	Clinic	2.0%	91%	9%	92%	8%
	Campground Camp	0.6%	100%	0%	100%	0%
2017	University Camp	47.8%	95%	5%	95%	5%
	Resort Camp	21.8%	95%	5%	95%	5%
	Home Camp	17.6%	86%	14%	86%	14%
	Hotel Camp	6.3%	98%	2%	97%	3%
	Day Camp	3.3%	92%	8%	92%	8%
	Clinic	2.5%	90%	10%	94%	6%
	Campground Camp	0.8%	100%	0%	100%	0%
2018	University Camp	45.8%	95%	5%	95%	5%
	Resort Camp	20.9%	96%	4%	97%	3%
	Home Camp	18.9%	87%	13%	86%	14%
	Hotel Camp	8.0%	95%	5%	95%	5%
	Day Camp	3.1%	91%	9%	90%	10%
	Clinic	2.5%	88%	12%	93%	7%
	Campground Camp	0.8%	100%	0%	100%	0%
2019	University Camp	43.9%	94%	6%	95%	5%
	Resort Camp	22.0%	96%	4%	97%	3%
	Home Camp	20.0%	86%	14%	86%	14%
	Hotel Camp	8.2%	91%	9%	91%	9%
	Day Camp	2.8%	89%	11%	88%	12%
	Clinic	2.4%	90%	10%	93%	7%
	Campground Camp	0.7%	100%	0%	100%	0%
Total	University Camp	47.8%	95%	5%	95%	5%
	Resort Camp	21.2%	95%	5%	96%	4%
	Home Camp	18.1%	86%	14%	86%	14%
	Hotel Camp	6.8%	95%	5%	95%	5%
	Day Camp	3.3%	90%	10%	90%	10%
	Clinic	2.2%	90%	10%	93%	7%
	Campground Camp	0.7%	100%	0%	100%	0%
Total			92%	8%	94%	6%

Sources: Camps Registration Data.

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Table 10. Fraction of Varsity's Cheer Camps Customers that Attend Camps in their Home CSA

Year	Type of Camp	Revenue Share	Entrants		Payments	
			Same CSA	Different CSA	Same CSA	Different CSA
2015	University Camp	92.4%	27%	73%	26%	74%
	Hotel Camp	3.0%	0%	100%	0%	100%
	Home Camp	2.3%	89%	11%	88%	12%
	Clinic	2.1%	28%	72%	25%	75%
	Day Camp	0.2%	100%	0%	100%	0%
2016	University Camp	88.6%	27%	73%	26%	74%
	Hotel Camp	5.7%	12%	88%	12%	88%
	Home Camp	3.4%	97%	3%	97%	3%
	Clinic	2.3%	43%	57%	40%	60%
	Day Camp	0.1%	100%	0%	100%	0%
2017	University Camp	90.7%	26%	74%	23%	77%
	Hotel Camp	4.3%	6%	94%	6%	94%
	Home Camp	2.5%	100%	0%	100%	0%
	Clinic	2.4%	43%	57%	44%	56%
	Day Camp	0.1%	100%	0%	100%	0%
2018	University Camp	89.5%	23%	77%	22%	78%
	Hotel Camp	3.7%	14%	86%	12%	88%
	Home Camp	3.5%	100%	0%	100%	0%
	Clinic	3.3%	36%	64%	34%	66%
2019	University Camp	88.9%	27%	73%	24%	76%
	Hotel Camp	4.4%	11%	89%	11%	89%
	Clinic	3.6%	30%	70%	27%	73%
	Home Camp	3.1%	97%	3%	97%	3%
Total	University Camp	90.1%	26%	74%	24%	76%
	Hotel Camp	4.2%	9%	91%	9%	91%
	Home Camp	2.9%	97%	3%	97%	3%
	Clinic	2.7%	36%	64%	34%	66%
	Day Camp	0.1%	100%	0%	100%	0%
Total			30%	70%	26%	74%

Sources: Camps Registration Data; CSA/MSA Information and Populations.

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Table 11. Fraction of Varsity's All-Star Cheer Competitions Customers that Attended Competitions in their Home Region

Season	Type of Event	Entrants		Registration Fees	
		Same Region	Different Region	Same Region	Different Region
2013-2014	Regular Season (Not World Bids) Events	94%	6%	93%	7%
	World Bids Events	69%	31%	70%	30%
2014-2015	Regular Season (Not World Bids) Events	93%	7%	92%	8%
	World Bids Events	72%	28%	71%	29%
2015-2016	Regular Season (Not World Bids) Events	93%	7%	92%	8%
	World Bids Events	75%	25%	73%	27%
2016-2017	Regular Season (Not World Bids) Events	93%	7%	92%	8%
	World Bids Events	77%	23%	75%	25%
2017-2018	Regular Season (Not World Bids) Events	92%	8%	92%	8%
	World Bids Events	77%	23%	75%	25%
2018-2019	Regular Season (Not World Bids) Events	91%	9%	92%	8%
	World Bids Events	78%	22%	76%	24%
Total	Regular Season (Not World Bids) Events	93%	7%	92%	8%
	World Bids Events	75%	25%	74%	26%
Total	Total	87%	13%	84%	16%

Sources: Varsity Registration Data; World Bids Events Data; CSA/MSA Information and Populations.

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Table 12. Fraction of Varsity's All-Star Cheer Competitions Customers that Attend Competitions in their Home CSA

Season	Type of Event	Entrants		Registration Fees	
		Same CSA	Different CSA	Same CSA	Different CSA
2013-2014	Regular Season (Not World Bids) Events	33%	67%	28%	72%
	World Bids Events	10%	90%	8%	92%
2014-2015	Regular Season (Not World Bids) Events	34%	66%	29%	71%
	World Bids Events	9%	91%	7%	93%
2015-2016	Regular Season (Not World Bids) Events	35%	65%	30%	70%
	World Bids Events	10%	90%	9%	91%
2016-2017	Regular Season (Not World Bids) Events	33%	67%	29%	71%
	World Bids Events	9%	91%	9%	91%
2017-2018	Regular Season (Not World Bids) Events	33%	67%	30%	70%
	World Bids Events	12%	88%	10%	90%
2018-2019	Regular Season (Not World Bids) Events	34%	66%	31%	69%
	World Bids Events	14%	86%	12%	88%
Total	Regular Season (Not World Bids) Events	34%	66%	30%	70%
	World Bids Events	11%	89%	9%	91%
Total	Total	27%	73%	22%	78%

Sources: Varsity Registration Data; World Bids Events Data; CSA/MSA Information and Populations.

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Table 13. Varsity's Conditional Rebates Programs

	Season			
	2015-2016	2016-2017	2017-2018	2018-2019
Percentage of Entrants that **Do Not** Participate in VFP or "Network" Rebates Programs				
	36.7%	40.9%	35.6%	40.5%
Percentage of Entrants that Participate in VFP or "Network" Rebates Programs				
	63.3%	59.1%	64.4%	59.5%
Percentage of Entrants in the VFP or "Network" Rebates Programs with Rebate Percentage Strictly Greater Than …				
… 20%	75.4%	79.9%	74.2%	58.5%
… 40%	32.4%	33.8%	33.7%	30.3%
… 50%	20.9%	22.7%	20.3%	20.3%
… 60%	15.0%	13.4%	13.7%	14.8%
… 80%	7.1%	6.8%	6.5%	10.3%
… 100%	3.6%	4.2%	3.7%	6.7%

Sources: Murphy Report, Exhibit 53.

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Table 14. Athlete Counts for Acquired Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Data	Season	Total Participation Before Acquisition	Total Participation After Acquisition	Participation Change	Participation Percentage Change
ALO	12/15/2016	2016-2017	2017-2018	27,186	17,962	(9,224)	-33.9%
			2018-2019	27,186	15,683	(11,503)	-42.3%
ATC	4/21/2017	2016-2017	2017-2018	2,730	3,636	906	33.2%
			2018-2019	2,730	5,063	2,333	85.5%
CSG	11/15/2017	2016-2017	2018-2019	21,668	9,076	(12,592)	-58.1%
EPIC	1/19/2018	2016-2017	2018-2019	69,525	46,410	(23,115)	-33.2%
JF	11/2/2015	2014-2015	2016-2017	186,624	95,105	(91,519)	-49.0%
			2017-2018	186,624	121,516	(65,108)	-34.9%
			2018-2019	186,624	118,757	(67,867)	-36.4%
MGS	12/1/2017	2016-2017	2018-2019	8,767	10,094	1,327	15.1%
SCB	2/28/2017	2016	2017-2018	24,530	17,181	(7,349)	-30.0%
			2018-2019	24,530	13,602	(10,928)	-44.5%
TOTAL - Year 1 Only				**341,030**	**199,464**	**(141,566)**	**-41.5%**

Sources: Varsity Registration Data; Pre-Acquisition Data.

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Table 15. Total Athlete Participation for Legacy and CL Events, 2014-2015 Season Through 2018-2019 Season

Brand	Season	Total Participation	Participation Percentage Change
Legacy/CL	2014-2015	427,980	
	2015-2016	433,427	1.3%
	2016-2017	428,112	-1.2%
	2017-2018	414,693	-3.1%
	2018-2019	419,032	1.0%

Sources: Varsity Registration Data.

Notes: Events include all events acquired by Varsity prior to 2015, including Cheer Ltd. events acquired in 2014.

Table 16. Amendment 1 to Murphy Exhibit 45: Including Information on Total Athlete Participation

Acquired Brand		Period Studied		Pre-Acquisition				Post-Acquisition				Percentage Change			
		From	To	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete
Spirit Celebration	Continued	2015/2016	2017/2018	9	2,081	18,729	$67.28	9	1,977	17,793	$82.50		-5%	-5%	23%
	Unmatched	2015/2016	2017/2018	3	1,526	4,578	$59.99	1	1,436	1,436	$103.74	-67%	-6%	-69%	73%
	All Brand Events	2015/2017	2017/2019	12	1,942	23,307	$65.85	10	1,923	19,229	$84.09	-17%	-1%	-17%	28%
All Things Cheer	Continued	2015/2016	2017/2018	2	1,164	2,328	$90.92	2	1,756	3,512	$90.01		51%	51%	-1%
	Unmatched	2015/2016	2017/2018	2	584	1,168	$41.52	1	689	689	$89.13	-50%	18%	-41%	115%
	All Brand Events	2015/2017	2017/2019	4	874	3,496	$74.42	3	1,400	4,201	$89.87	-25%	60%	20%	21%
Aloha	Continued	2015/2016	2017/2018	15	1,223	18,345		15	1,298	19,470	$90.13		6%	6%	
	Unmatched	2015/2016	2017/2018	10	739	7,390		1	1,876	1,876	$99.10	-90%	154%	-75%	
	All Brand Events	2015/2017	2017/2019	25	1,029	25,735		16	1,334	21,346	$90.92	-36%	30%	-17%	
Mardi Gras Spirit	Continued	2016/2017	2018/2019	7	953	6,671	$73.14	7	1,472	10,304	$78.21		54%	54%	7%
	Unmatched	2016/2017	2018/2019	4	524	2,096	$77.76	1	753	753	$74.28	-75%	44%	-64%	-4%
	All Brand Events	2016/2018	2018/2020	11	797	8,767	$74.24	8	1,382	11,057	$77.94	-27%	73%	26%	5%
Champion Spirit Group	Continued	2016/2017	2018/2019	14	1,207	16,898	$62.32	14	1,748	24,472	$76.35		45%	45%	23%
	Unmatched	2016/2017	2018/2019	11	434	4,774	$47.52	2	1,208	2,416	$43.55	-82%	178%	-49%	-8%
	All Brand Events	2016/2018	2018/2020	25	867	21,672	$59.06	16	1,681	26,888	$73.40	-36%	94%	24%	24%
EPIC	Continued	2016/2017	2018/2019	55	1,112	61,160	$71.66	55	1,164	64,020	$72.45		5%	5%	1%
	Unmatched	2016/2017	2018/2019	21	436	9,156	$50.26	11	805	8,855	$54.98	-48%	85%	-3%	9%
	All Brand Events	2016/2018	2018/2020	76	925	70,316	$68.87	66	1,104	72,875	$70.33	-13%	19%	4%	2%
Total	Continued			102	1,217	124,131	$69.91	102	1,368	139,571	$75.74		12%	12%	8%
	Unmatched			51	572	29,162	$53.88	17	943	16,025	$60.67	-67%	65%	-45%	13%
	All Events			153	1,002	153,293	$67.18	119	1,308	155,596	$74.15	-22%	31%	$\boxed{1.5\%}$	10%

Sources: Varsity Registration Data; Pre-Acquisition Data.

Table 17. Amendment 2 to Murphy Exhibit 45: Including Information for the JAM Brands Acquisition

		Period Studied		Pre-Acquisition				Post-Acquisition				Percentage Change			
Acquired Brand		From	To	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete
JAM Brands	Continued	2014/2015	2016/2017	42	2,117	88,923	$91.43	42	1,693	71,114	$104.07		-20%	-20%	14%
	Unmatched	2014/2015	2016/2017	68	1,437	97,701	$59.96	25	960	23,991	$69.99	-63%	-33%	-75%	17%
	All Brand Events	2014/2015	2016/2017	110	1,697	186,624	$74.95	67	1,419	95,105	$95.47	-39%	-16%	-49%	27%
Spirit Celebration	Continued	2015/2016	2017/2018	9	2,081	18,729	$67.28	9	1,977	17,793	$82.50		-5%	-5%	23%
	Unmatched	2015/2016	2017/2018	3	1,526	4,578	$59.99	1	1,436	1,436	$103.74	-67%	-6%	-69%	73%
	All Brand Events	2015/2017	2017/2019	12	1,942	23,307	$65.85	10	1,923	19,229	$84.09	-17%	-1%	-17%	28%
All Things Cheer	Continued	2015/2016	2017/2018	2	1,164	2,328	$90.92	2	1,756	3,512	$90.01		51%	51%	-1%
	Unmatched	2015/2016	2017/2018	2	584	1,168	$41.52	1	689	689	$89.13	-50%	18%	-41%	115%
	All Brand Events	2015/2017	2017/2019	4	874	3,496	$74.42	3	1,400	4,201	$89.87	-25%	60%	20%	21%
Aloha	Continued	2015/2016	2017/2018	15	1,223	18,345		15	1,298	19,470	$90.13		6%	6%	
	Unmatched	2015/2016	2017/2018	10	739	7,390		1	1,876	1,876	$99.10	-90%	154%	-75%	
	All Brand Events	2015/2017	2017/2019	25	1,029	25,735		16	1,334	21,346	$90.92	-36%	30%	-17%	
Mardi Gras Spirit	Continued	2016/2017	2018/2019	7	953	6,671	$73.14	7	1,472	10,304	$78.21		54%	54%	7%
	Unmatched	2016/2017	2018/2019	4	524	2,096	$77.76	1	753	753	$74.28	-75%	44%	-64%	-4%
	All Brand Events	2016/2018	2018/2020	11	797	8,767	$74.24	8	1,382	11,057	$77.94	-27%	73%	26%	5%
Champion Spirit Group	Continued	2016/2017	2018/2019	14	1,207	16,898	$62.32	14	1,748	24,472	$76.35		45%	45%	23%
	Unmatched	2016/2017	2018/2019	11	434	4,774	$47.52	2	1,208	2,416	$43.55	-82%	178%	-49%	-8%
	All Brand Events	2016/2018	2018/2020	25	867	21,672	$59.06	16	1,681	26,888	$73.40	-36%	94%	24%	24%
EPIC	Continued	2016/2017	2018/2019	55	1,112	61,160	$71.66	55	1,164	64,020	$72.45		5%	5%	1%
	Unmatched	2016/2017	2018/2019	21	436	9,156	$50.26	11	805	8,855	$54.98	-48%	85%	-3%	9%
	All Brand Events	2016/2018	2018/2020	76	925	70,316	$68.87	66	1,104	72,875	$70.33	-13%	19%	4%	2%
Total	Continued			144	1,480	213,054	$78.89	144	1,463	210,685	$85.30		-1%	-1%	8%
	Unmatched			119	1,066	126,863	$58.56	42	953	40,016	$66.26	-65%	-11%	-68%	13%
	All Events			263	1,292	339,917	$71.30	186	1,348	250,701	$82.26	-29%	4%	**-26.2%**	15%

Sources: Varsity Registration Data; Pre-Acquisition Data.

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Table 18. Corrected Murphy Exhibit 45: Summary of Participation & Price Changes for Acquired Competitions Pre- and Post-Acquisition

		Period Studied		Pre-Acquisition				Post-Acquisition				Percentage Change			
Acquired Brand		From	To	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete
JAM Brands	Continued	2014/2015	2016/2017	42	2,117	88,923	$91.43	42	1,693	71,114	$104.07		-20%	-20%	14%
	Unmatched	2014/2015	2016/2017	68	1,437	97,701	$59.96	25	960	23,991	$69.99	-63%	-33%	-75%	17%
	All Brand Events	2014/2015	2016/2017	110	1,697	186,624	$74.95	67	1,419	95,105	$95.47	-39%	-16%	-49%	27%
Spirit Celebration	Continued	2016	2017/2018	9	2,139	19,252	$64.77	9	1,762	15,856	$84.86		-18%	-18%	31%
	Unmatched	2016	2017/2018	3	1,759	5,278	$44.52	1	1,325	1,325	$73.37	-67%	-25%	-75%	65%
	All Brand Events	2016	2017/2018	12	2,044	24,530	$60.41	10	1,718	17,181	$83.97	-17%	-16%	-30%	39%
All Things Cheer	Continued	2016/2017	2017/2018	2	1,011	2,022	$76.39	2	1,542	3,083	$97.85		52%	52%	28%
	Unmatched	2016/2017	2017/2018	2	354	708	$43.60	1	553	553	$103.01	-50%	56%	-22%	136%
	All Brand Events	2016/2017	2017/2018	4	683	2,730	$67.89	3	1,212	3,636	$98.63	-25%	78%	33%	45%
Aloha	Continued	2016/2017	2017/2018	15	1,058	15,875	$99.30	15	1,093	16,397	$99.01		3%	3%	0%
	Unmatched	2016/2017	2017/2018	10	1,131	11,311	$73.80	1	1,565	1,565	$113.04	-90%	38%	-86%	53%
	All Brand Events	2016/2017	2017/2018	25	1,087	27,186	$88.69	16	1,123	17,962	$100.23	-36%	3%	-34%	13%
Mardi Gras Spirit	Continued	2016/2017	2018/2019	7	953	6,670	$72.00	7	1,336	9,352	$79.69		40%	40%	11%
	Unmatched	2016/2017	2018/2019	4	524	2,097	$73.53	1	742	742	$69.64	-75%	42%	-65%	-5%
	All Brand Events	2016/2017	2018/2019	11	797	8,767	$72.37	8	1,262	10,094	$78.95	-27%	58%	15%	9%
Champion Spirit Group	Continued	2016/2017	2018/2019	7	1,041	7,289	$71.49	7	1,137	7,959	$95.11		9%	9%	33%
	Unmatched	2016/2017	2018/2019	18	799	14,379	$51.92	2	559	1,117	$76.39	-89%	-30%	-92%	47%
	All Brand Events	2016/2017	2018/2019	25	867	21,668	$58.50	9	1,008	9,076	$92.81	-64%	16%	-58%	59%
EPIC	Continued	2016/2017	2018/2019	51	1,138	58,018	$69.89	51	716	36,510	$78.65		-37%	-37%	13%
	Unmatched	2016/2017	2018/2019	23	500	11,507	$56.05	18	550	9,900	$55.64	-22%	10%	-14%	-1%
	All Brand Events	2016/2017	2018/2019	74	940	69,525	$67.60	69	673	46,410	$73.74	-7%	-28%	-33%	9%
Total (excl. JAM Brands)	Continued			91	1,199	109,126	$73.62	91	980	89,157	$85.74		-18%	-18%	16%
	Unmatched			60	755	45,280	$58.44	24	633	15,202	$67.02	-60%	-16%	-66%	15%
	All Events			151	1,023	154,406	$69.17	115	907	104,359	$83.01	-24%	-11%	**-32.4%**	20%
Total	Continued			133	1,489	198,049	$81.62	133	1,205	160,271	$93.87		-19%	-19%	15%
	Unmatched			128	1,117	142,981	$59.48	49	800	39,193	$68.84	-62%	-28%	-73%	16%
	All Events			261	1,307	341,030	$72.34	182	1,096	199,464	$88.95	-30%	-16%	**-41.5%**	23%

Sources: Varsity Registration Data; Pre-Acquisition Data.

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Table 19. Murphy Exhibit 45 Information for Varsity Events Acquired Prior to 2015 ("Legacy Events")

Period Studied		Pre-Acquisition				Post-Acquisition				Percentage Change			
		Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete (2018$)	Number of Events	Average Athlete Participation	Total Athlete Participation	Real Average Price per Athlete
From 2014-2015 to 2015-2016	Continued	224	1,880	421,173	$89.02	224	1,851	414,696	$92.98		-2%	-2%	4%
	Unmatched	17	400	6,807	$67.60	19	568	10,784	$87.37	12%	42%	58%	29%
	Total	241	1,776	427,980	$88.68	243	1,751	425,480	$92.84	1%	-1%	-1%	5%
From 2015-2016 to 2016-2017	Continued	224	1,859	416,339	$93.17	224	1,705	381,881	$96.70		-8%	-8%	4%
	Unmatched	19	481	9,141	$77.80	14	514	7,201	$81.48	-26%	7%	-21%	5%
	Total	243	1,751	425,480	$92.84	238	1,635	389,082	$96.42	-2%	-7%	-9%	4%
From 2016-2017 to 2017-2018	Continued	210	1,768	371,272	$97.80	210	1,706	358,297	$98.21		-3%	-3%	0%
	Unmatched	28	636	17,810	$67.63	17	683	11,610	$76.26	-39%	7%	-35%	13%
	Total	238	1,635	389,082	$96.42	227	1,630	369,907	$97.52	-5%	0%	-5%	1%
From 2017-2018 to 2018-2019	Continued	206	1,760	362,509	$98.27	206	1,736	357,522	$100.06		-1%	-1%	2%
	Unmatched	21	352	7,398	$60.76	23	644	14,804	$59.57	10%	83%	100%	-2%
	Total	227	1,630	369,907	$97.52	229	1,626	372,326	$98.45	1%	0%	1%	1%
From 2014-2015 to 2018-2019	Continued	185	2,084	385,465	$91.72	185	1,792	331,462	$100.59		-14%	-14%	10%
	Unmatched	56	759	42,515	$61.08	44	929	40,864	$81.04	-21%	22%	-4%	33%
	Total	241	1,776	427,980	$88.68	229	1,626	372,326	$98.45	-5%	-8%	**$\boxed{-13.0\%}$**	11%

Sources: Varsity Registration Data.

Table 20. Chi-Squared Test of the Observed Frequencies of the Last Digit of the Participant Counts from the NFHS High School Participation Survey

Last Digit of Participants Count	Observed	Expected	Observed Minus Expected	Pearson
0	83	50.6	32.4	4.555
1	43	50.6	-7.6	-1.068
2	35	50.6	-15.6	-2.193
3	40	50.6	-10.6	-1.490
4	52	50.6	1.4	0.197
5	53	50.6	2.4	0.337
6	55	50.6	4.4	0.619
7	43	50.6	-7.6	-1.068
8	43	50.6	-7.6	-1.068
9	59	50.6	8.4	1.181
Chi-Squared Tests	H0: observed frequencies = expected frequencies			
	Pearson chi2(9) = 33.1304; Probability value = 0.0001			
	likelihood-ratio chi2(9) = 30.5993; Probability value = 0.0003			

Sources: NFHS High School Participation Survey Data.

Table 21. Regression Output for Overcharge Model for Acquired Brand Events

	Dependent Variable: Log Real Price			
	(1)	(2)	(3)	(4)
VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
World Bids Events Flag for ALO	0.292	0.292	0.290	0.290
	(0.179)	(0.216)	(0.179)	(0.216)
World Bids Events Flag for ATC	0.421*	0.421***		
	(0.255)	(0.076)		
World Bids Events Flag for CSG	0.212	0.212***	0.295	0.295***
	(0.370)	(0.038)	(0.262)	(0.015)
World Bids Events Flag for EPIC	0.926***	0.926***	0.877***	0.877***
	(0.122)	(0.047)	(0.117)	(0.056)
Post-Season Events Flag for JF	-0.126	-0.126***	-0.126	-0.126***
	(0.197)	(0.047)	(0.197)	(0.047)
World Bids Events Flag for JF	0.007	0.007	0.007	0.007
	(0.106)	(0.036)	(0.105)	(0.036)
World Bids Events Flag for MGS	0.368**	0.368***	0.366***	0.366***
	(0.145)	(0.095)	(0.130)	(0.101)
World Bids Events Flag for SCB	0.203	0.203	0.314***	0.314
	(0.127)	(0.177)	(0.113)	(0.219)
Overcharge Flag for ALO	0.155	0.155		
	(0.114)	(0.110)		
Overcharge Flag for ATC	0.317	0.317***		
	(0.284)	(0.070)		
Overcharge Flag for CSG	0.289	0.289***		
	(0.262)	(0.038)		
Overcharge Flag for EPIC	0.105	0.105***		
	(0.080)	(0.038)		
Overcharge Flag for JF	0.207***	0.207***		
	(0.033)	(0.014)		
Overcharge Flag for MGS	0.203	0.203**		
	(0.159)	(0.088)		
Overcharge Flag for SCB	0.404***	0.404***		
	(0.106)	(0.107)		
Overcharge Flag			0.207***	0.207***
			(0.028)	(0.015)
Constant	4.049***	4.049***	4.049***	4.049***
	(0.025)	(0.043)	(0.025)	(0.043)
Observations	632	632	632	632
R-squared	0.717	0.717	0.714	0.714
Weighted by Athlete Count	Yes	Yes	Yes	Yes
Event Dummies	Yes	Yes	Yes	Yes
Robust Standard Errors	No	Yes	No	Yes

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.

Table 22. Price Overcharge for Varsity's Acquired Brand Events

Brand	Overcharge	Robust Standard Error	t-statistic	P-value	95% Confidence Interval, Lower Bound	95% Confidence Interval, Upper Bound
ALO	14.4%	0.110	1.41	0.160	-6.4%	31.1%
ATC	27.2%	0.070	4.56	0.000	16.5%	36.5%
CSG	25.1%	0.038	7.71	0.000	19.4%	30.4%
EPIC	10.0%	0.038	2.77	0.006	3.0%	16.5%
JF	18.7%	0.014	14.91	0.000	16.4%	20.9%
MGS	18.4%	0.088	2.31	0.021	3.0%	31.3%
SCB	33.2%	0.107	3.78	0.000	17.6%	45.9%
F-Test	H0: Overcharge_ALO = Overcharge_ATC = Overcharge_CSG = Overcharge_EPIC = Overcharge_JF = Overcharge_MGS = Overcharge_SCB = 0					
	F(7, 479) = 47.41					
	Prob > F = 0.000					
ALL BRANDS	18.7%	0.015	13.60	0.000	16.2%	21.1%

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.

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Table 23. Regression Output for Overcharge Model

	Dependent Variable: Log Real Price			
	(1)	(2)	(3)	(4)
VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Postseason Flag in MW	0.924***	0.924	0.988***	0.988
	(0.192)	(0.692)	(0.186)	(0.694)
World Bids Event Flag in MW	0.502***	0.502***	0.486***	0.486***
	(0.062)	(0.058)	(0.061)	(0.059)
School Flag in MW	-0.991***	-0.991***	-1.002***	-1.002***
	(0.072)	(0.072)	(0.072)	(0.071)
Postseason Flag in NE	-0.003	-0.003	-0.084	-0.084
	(0.085)	(0.087)	(0.079)	(0.086)
World Bids Event Flag in NE	0.541***	0.541***	0.560***	0.560***
	(0.051)	(0.035)	(0.051)	(0.035)
School Flag in NE	-1.120***	-1.120***	-1.101***	-1.101***
	(0.107)	(0.106)	(0.107)	(0.105)
Postseason Flag in SE	2.012***	2.012***	2.014***	2.014***
	(0.039)	(0.164)	(0.039)	(0.164)
World Bids Event Flag in SE	0.486***	0.486***	0.488***	0.488***
	(0.030)	(0.056)	(0.030)	(0.056)
School Flag in SE	-0.868***	-0.868***	-0.866***	-0.866***
	(0.059)	(0.061)	(0.059)	(0.060)
Postseason Flag in SW	-0.101	-0.101	-0.100	-0.100
	(0.249)	(0.086)	(0.249)	(0.085)
World Bids Event Flag in SW	0.656***	0.656***	0.657***	0.657***
	(0.038)	(0.057)	(0.038)	(0.057)
School Flag in SW	-0.944***	-0.944***	-0.943***	-0.943***
	(0.061)	(0.068)	(0.061)	(0.068)
Postseason Flag in W	-0.014	-0.014	0.027	0.027
	(0.209)	(0.085)	(0.209)	(0.053)
World Bids Event Flag in W	0.596***	0.596***	0.590***	0.590***
	(0.045)	(0.050)	(0.046)	(0.050)
School Flag in W	-1.337***	-1.337***	-1.347***	-1.347***
	(0.040)	(0.062)	(0.040)	(0.061)
Overcharge Flag in MW	0.267***	0.267***		
	(0.042)	(0.030)		
Overcharge Flag in NE	0.420***	0.420***		
	(0.047)	(0.031)		
Overcharge Flag in SE	0.359***	0.359***		
	(0.059)	(0.055)		
Overcharge Flag in SW	0.338***	0.338***		
	(0.078)	(0.055)		
Overcharge Flag in W	0.105	0.105		
	(0.085)	(0.068)		
Overcharge Flag			0.320***	0.320***
			(0.025)	(0.020)
Constant	4.050***	4.050***	4.067***	4.067***
	(0.078)	(0.055)	(0.033)	(0.036)
Observations	2,613	2,613	2,613	2,613
R-squared	0.774	0.774	0.773	0.773
Weighted by Athlete Count	Yes	Yes	Yes	Yes
Region Dummies	Yes	Yes	Yes	Yes
Event Dummies	Yes	Yes	Yes	Yes
Controls for Cost	No	No	No	No
Robust Standard Errors	No	Yes	No	Yes

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Sources: Varsity Registrations Data; Pre-Acquisition Data; World Bids Events Data.

Table 24. Price Overcharge for Varsity Cheer Competitions

Region	Overcharge	Robust Standard Error	t-statistic	P-value	95% Confidence Interval, Lower Bound	95% Confidence Interval, Upper Bound
MW	23.4%	0.030	8.97	0.000	18.8%	27.8%
NE	34.3%	0.031	13.68	0.000	30.2%	38.1%
SE	30.2%	0.055	6.54	0.000	22.2%	37.3%
SW	28.7%	0.055	6.15	0.000	20.6%	35.9%
W	9.9%	0.068	1.54	0.124	-2.9%	21.2%
F-Test	H0: Overcharge_MW = Overcharge_SE = Overcharge_SW					
	F(2, 2448) = 1.43					
	Prob > F = 0.24					
ALL REGIONS	27.4%	0.020	16.27	0.000	24.5%	30.1%

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.

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Table 25. Regression Output for Overcharge Model with Cost Controls

	Dependent Variable: Log Real Price			
	(1)	(2)	(3)	(4)
VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Log Real Cost per Athlete	0.513***	0.513***	0.508***	0.508***
	(0.015)	(0.047)	(0.015)	(0.047)
Postseason Flag in MW	0.423	0.423*	0.456**	0.456**
	(0.259)	(0.254)	(0.224)	(0.209)
World Bids Event Flag in MW	0.392***	0.392***	0.399***	0.399***
	(0.044)	(0.026)	(0.044)	(0.026)
Postseason Flag in NE	-0.280**	-0.280***	-0.074	-0.074
	(0.125)	(0.085)	(0.116)	(0.082)
World Bids Event Flag in NE	0.283***	0.283***	0.277***	0.277***
	(0.035)	(0.033)	(0.035)	(0.034)
Postseason Flag in SE	0.843***	0.843***	0.856***	0.856***
	(0.042)	(0.176)	(0.042)	(0.176)
World Bids Event Flag in SE	0.139***	0.139***	0.142***	0.142***
	(0.022)	(0.038)	(0.022)	(0.038)
Postseason Flag in SW	-0.379**	-0.379***	-0.374**	-0.374***
	(0.162)	(0.089)	(0.163)	(0.089)
World Bids Event Flag in SW	0.349***	0.349***	0.355***	0.355***
	(0.028)	(0.062)	(0.028)	(0.061)
Postseason Flag in W	-0.270*	-0.270***	-0.270*	-0.270***
	(0.157)	(0.041)	(0.158)	(0.041)
World Bids Event Flag in W	0.090***	0.090**	0.092***	0.092**
	(0.033)	(0.044)	(0.033)	(0.044)
Overcharge Flag in MW	0.310***	0.310***		
	(0.069)	(0.100)		
Overcharge Flag in NE	0.046	0.046		
	(0.062)	(0.051)		
Overcharge Flag in SE	0.323***	0.323***		
	(0.113)	(0.044)		
Overcharge Flag in SW	0.416***	0.416***		
	(0.069)	(0.085)		
Overcharge Flag in W	0.603***	0.603***		
	(0.222)	(0.123)		
Overcharge Flag			0.260***	0.260***
			(0.036)	(0.045)
Constant	2.083***	2.083***	2.159***	2.159***
	(0.086)	(0.202)	(0.073)	(0.201)
Observations	1,365	1,365	1,365	1,365
R-squared	0.896	0.896	0.895	0.895
Weighted by Athlete Count	Yes	Yes	Yes	Yes
Region Dummies	Yes	Yes	Yes	Yes
Event Dummies	Yes	Yes	Yes	Yes
Controls for Cost	No	No	No	No
Robust Standard Errors	No	Yes	No	Yes

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Sources: Varsity Registrations Data; Pre-Acquisition Data; World Bids Events Data.

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Table 26. Price Overcharge for Varsity Cheer Competitions: Overcharge Model with Cost Controls

Region	Overcharge	Robust Standard Error	t-statistic	P-value	95% Confidence Interval, Lower Bound	95% Confidence Interval, Upper Bound
MW	26.7%	0.100	3.09	0.002	10.7%	39.8%
NE	4.5%	0.051	0.91	0.364	-5.5%	13.6%
SE	27.6%	0.044	7.29	0.000	21.0%	33.6%
SW	34.0%	0.085	4.90	0.000	22.1%	44.2%
W	45.3%	0.123	4.93	0.000	30.4%	57.0%
F-Test	H0: Overcharge_MW = Overcharge_SE = Overcharge_SW = Overcharge_W					
	F(3, 1205) = 1.78					
	Prob > F = 0.149					
ALL REGIONS	22.9%	0.045	5.81	0.000	15.8%	29.3%

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.

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Table 27. Regression Output for Dr. Murphy's Overcharge Model with Rebates Deducted from Price

Dependent Variable: Log Real Price

VARIABLES	(1) Regression 1	(2) Regression 2	(3) Regression 3	(4) Regression 4
Postseason Flag in MW	0.961***	0.961	1.014***	1.014
	(0.188)	(0.713)	(0.183)	(0.713)
World Bids Event Flag in MW	0.464***	0.464***	0.451***	0.451***
	(0.061)	(0.053)	(0.060)	(0.054)
School Flag in MW	-0.871***	-0.871***	-0.880***	-0.880***
	(0.071)	(0.071)	(0.071)	(0.071)
Postseason Flag in NE	-0.003	-0.003	-0.072	-0.072
	(0.084)	(0.077)	(0.078)	(0.076)
World Bids Event Flag in NE	0.482***	0.482***	0.498***	0.498***
	(0.050)	(0.037)	(0.050)	(0.037)
School Flag in NE	-0.960***	-0.960***	-0.944***	-0.944***
	(0.106)	(0.106)	(0.105)	(0.105)
Postseason Flag in SE	2.034***	2.034***	2.036***	2.036***
	(0.038)	(0.164)	(0.038)	(0.164)
World Bids Event Flag in SE	0.442***	0.442***	0.444***	0.444***
	(0.029)	(0.055)	(0.029)	(0.054)
School Flag in SE	-0.710***	-0.710***	-0.708***	-0.708***
	(0.059)	(0.060)	(0.059)	(0.060)
Postseason Flag in SW	0.004	0.004	0.006	0.006
	(0.245)	(0.095)	(0.245)	(0.095)
World Bids Event Flag in SW	0.614***	0.614***	0.616***	0.616***
	(0.037)	(0.057)	(0.037)	(0.056)
School Flag in SW	-0.801***	-0.801***	-0.799***	-0.799***
	(0.060)	(0.069)	(0.060)	(0.068)
Postseason Flag in W	0.044	0.044	0.084	0.084
	(0.206)	(0.099)	(0.205)	(0.063)
World Bids Event Flag in W	0.554***	0.554***	0.548***	0.548***
	(0.045)	(0.049)	(0.045)	(0.049)
School Flag in W	-1.212***	-1.212***	-1.222***	-1.222***
	(0.040)	(0.061)	(0.040)	(0.060)
Overcharge Flag in MW	0.146***	0.146***		
	(0.042)	(0.030)		
Overcharge Flag in NE	0.275***	0.275***		
	(0.046)	(0.030)		
Overcharge Flag in SE	0.222***	0.222***		
	(0.058)	(0.055)		
Overcharge Flag in SW	0.228***	0.228***		
	(0.077)	(0.054)		
Overcharge Flag in W	-0.017	-0.017		
	(0.084)	(0.068)		
Overcharge Flag			0.191***	0.191***
			(0.025)	(0.020)
Constant	4.016***	4.016***	4.052***	4.052***
	(0.077)	(0.054)	(0.033)	(0.036)
Observations	2,613	2,613	2,613	2,613
R-squared	0.757	0.757	0.756	0.756
Weighted by Athlete Count	Yes	Yes	Yes	Yes
Region Dummies	Yes	Yes	Yes	Yes
Event Dummies	Yes	Yes	Yes	Yes
Controls for Cost	No	No	No	No
Robust Standard Errors	No	Yes	No	Yes

Standard errors in parentheses
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.

Table 28. Price Overcharge for Dr. Murphy's Overcharge Model with Rebates Deducted from Price

Region	Overcharge	Robust Standard Error	t-statistic	P-value	95% Confidence Interval, Lower Bound	95% Confidence Interval, Upper Bound
MW	13.6%	0.030	4.92	0.000	8.4%	18.5%
NE	24.0%	0.030	9.03	0.000	19.4%	28.4%
SE	19.9%	0.055	4.04	0.000	10.8%	28.0%
SW	20.4%	0.054	4.27	0.000	11.6%	28.3%
W	-1.7%	0.068	-0.25	0.806	-16.3%	11.1%
F-Test	H0: Overcharge_MW = Overcharge_NE = Overcharge_SE = Overcharge_SW = Overcharge_W = 0					
	F(5, 2448) = 28.1					
	Prob > F = 0.000					
ALL REGIONS	17.4%	0.020	9.76	0.000	14.1%	20.5%

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.

Table 29. Regression Output for Dr. Murphy's Overcharge Model with Rebates Deducted from Price and Dr. Murphy's Cheer Popularity Index Included as an Additional Explanatory Variable

Dependent Variable: Log Real Price

VARIABLES	(1) Regression 1	(2) Regression 2	(3) Regression 3	(4) Regression 4
NFHS Survey Index	0.002***	0.002***	0.002***	0.002***
	(0.000)	(0.001)	(0.000)	(0.001)
Postseason Flag in MW	0.981***	0.981	1.041***	1.041
	(0.187)	(0.723)	(0.182)	(0.725)
World Bids Event Flag in MW	0.466***	0.466***	0.451***	0.451***
	(0.061)	(0.054)	(0.060)	(0.055)
School Flag in MW	-0.884***	-0.884***	-0.894***	-0.894***
	(0.071)	(0.073)	(0.071)	(0.072)
Postseason Flag in NE	0.046	0.046	-0.100	-0.100*
	(0.115)	(0.042)	(0.078)	(0.058)
World Bids Event Flag in NE	0.487***	0.487***	0.503***	0.503***
	(0.050)	(0.038)	(0.050)	(0.038)
School Flag in NE	-0.972***	-0.972***	-0.957***	-0.957***
	(0.105)	(0.104)	(0.105)	(0.104)
Postseason Flag in SE	1.998***	1.998***	2.000***	2.000***
	(0.038)	(0.164)	(0.038)	(0.164)
World Bids Event Flag in SE	0.439***	0.439***	0.441***	0.441***
	(0.029)	(0.055)	(0.029)	(0.054)
School Flag in SE	-0.731***	-0.731***	-0.729***	-0.729***
	(0.058)	(0.060)	(0.058)	(0.060)
Postseason Flag in SW	-0.052	-0.052	-0.050	-0.050
	(0.243)	(0.092)	(0.244)	(0.091)
World Bids Event Flag in SW	0.614***	0.614***	0.615***	0.615***
	(0.037)	(0.050)	(0.037)	(0.050)
School Flag in SW	-0.829***	-0.829***	-0.827***	-0.827***
	(0.060)	(0.073)	(0.060)	(0.073)
Postseason Flag in W	0.008	0.008	0.045	0.045
	(0.204)	(0.085)	(0.204)	(0.055)
World Bids Event Flag in W	0.554***	0.554***	0.549***	0.549***
	(0.044)	(0.048)	(0.045)	(0.047)
School Flag in W	-1.222***	-1.222***	-1.231***	-1.231***
	(0.039)	(0.060)	(0.039)	(0.060)
Overcharge Flag in MW	0.096**	0.096***		
	(0.042)	(0.035)		
Overcharge Flag in NE	0.229***	0.229***		
	(0.047)	(0.034)		
Overcharge Flag in SE	0.183***	0.183***		
	(0.058)	(0.057)		
Overcharge Flag in SW	0.179**	0.179***		
	(0.077)	(0.057)		
Overcharge Flag in W	-0.050	-0.050		
	(0.083)	(0.070)		
Overcharge Flag			0.145***	0.145***
			(0.026)	(0.025)
Constant	3.534***	3.534***	3.564***	3.564***
	(0.114)	(0.151)	(0.092)	(0.146)
Observations	2,613	2,613	2,613	2,613
R-squared	0.760	0.760	0.759	0.759
Weighted by Athlete Count	Yes	Yes	Yes	Yes
Region Dummies	Yes	Yes	Yes	Yes
Event Dummies	Yes	Yes	Yes	Yes
Controls for Cost	No	No	No	No
Robust Standard Errors	No	Yes	No	Yes

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Sources: Varsity Registrations Data; Pre-Acquisition Data; World Bids Events Data.

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Table 30. Price Overcharge for Dr. Murphy's Overcharge Model with Rebates Deducted from Price and Dr. Murphy's Cheer Popularity Index Included as an Additional Explanatory Variable

Region	Overcharge	Robust Standard Error	t-statistic	P-value	95% Confidence Interval, Lower Bound	95% Confidence Interval, Upper Bound
MW	9.1%	0.035	2.71	0.007	2.6%	15.2%
NE	20.4%	0.034	6.75	0.000	15.0%	25.6%
SE	16.7%	0.057	3.18	0.001	6.8%	25.6%
SW	16.4%	0.057	3.11	0.002	6.4%	25.3%
W	-5.2%	0.070	-0.72	0.472	-20.7%	8.3%
F-Test	H0: Overcharge_MW = Overcharge_NE = Overcharge_SE = Overcharge_SW = Overcharge_W = 0					
	F(5, 2447) = 12.02					
	Prob > F = 0.000					
ALL REGIONS	13.5%	0.025	5.83	0.000	9.1%	17.6%

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data; NFHS High School Participation Survey Data.

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Table 31. Varsity Overcharge on Cheer Apparel (TABLE DESIGNATED HIGHLY CONFIDENTIAL – EXPERT AND ATTORNEYS' EYES ONLY)

Year	Nfinity Weighted Distribution (5th, 15th, …, 95th Percentiles)	Varsity Weighted Distribution (5th, 15th, …, 95th Percentiles)	Overcharge
2016	($34.73, $39.07, $46.75, $46.75, $46.75, $51.85, $51.85, $51.85, $51.85, $71.43)	($44.02, $52.95, $52.95, $52.95, $71.02, $77.83, $80.98, $80.98, $81.29, $87.69)	27.1%
2017	($42.37, $42.37, $53.76, $53.76, $53.76, $61.26, $61.26, $61.26, $71.92, $82.76)	($40.70, $45.49, $50.90, $50.90, $72.26, $79.39, $79.39, $79.39, $81.64, $84.98)	10.8%
2018	($41.70, $41.70, $54.79, $54.79, $59.39, $59.39, $59.39, $59.39, $79.22, $81.68)	($38.47, $48.81, $48.81, $62.32, $68.33, $72.47, $79.67, $84.62, $88.02, $94.82)	12.5%
2019	($44.59, $56.73, $56.73, $56.73, $66.22, $66.22, $66.22, $66.22, $78.65, $78.65)	($40.37, $49.68, $49.68, $59.91, $70.26, $87.54, $90.41, $90.41, $90.41, $97.43)	9.6%

Sources: Varsity Apparel Data; NFINITY000297 (DESIGNATED HIGHLY CONFIDENTIAL – EXPERT AND ATTORNEYS' EYES ONLY).[1]

[1] Note: All content citing to or relating to the production made by Nfinity Athletic LLC, shall be designated as "Highly Confidential – Attorneys and Expert Eyes Only" pursuant to Order Granting Joint Motion for Entry of Stipulated Protective Order in Fusion Elite All Stars, et al. v. Nfinity Athletic LLC, Case 2:22-cv-02226-SHL-tmp, ECF No. 30, (W.D. Tenn.), filed May 31, 2022 ("Nfinity PO").

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Table 32. Varsity Acquisition Summary Table, 2004 – 2018

Acquired Event Producer	Brands	Acquisition Date	US Events	World Bids Events	Yearly Revenue	Cash Purchase Price
National Spirit Group[1]	NCA, NDA	February 12, 2004	14*	1	Not reported	Not reported
Athletic Championships[2]	ATH	June 27, 2005	11*	1	Not reported	Not reported
World Spirit Federation[3]	WSF	July 01, 2006	6*	2	Not reported	Not reported
Spirit Team Cheer & Dance Championships[4]	The American Championships	October 02, 2006	10*	1	Not reported	Not reported
Spirit Sports[5]	Spirit Sports Cheer & Dance	November 08, 2006	3*	1	Not reported	Not reported
American Cheer Power[6]	ACP	January 08, 2008	20*	1	Not reported	Not reported
Spirit Xpress Cheerleading & All Star Challenge[7]	All Star Challenge, Spirit Xpress Cheerleading	April 15, 2008	4*	1	Not reported	Not reported
Spirit Cheer[8]	Spirit Cheer	October 24, 2008	7*	1	Not reported	Not reported
Spirit Festival[9]	Spirit Festival	August 17, 2011	1*	1	Not reported	Not reported
PacWest[10]	Pac West	December 15, 2011	2*	1	Not reported	Not reported
Spirit Holding[11]	CheerSport & Universal Spirit Association	December 20, 2012	40*	1	$ 6,000,000	$ 6,000,000
Cheer Ltd.[12]	CL	June 20, 2014	6	1	$ 1,000,000	Not reported
JamBrands[13]	JAMfest, COA, America's Best, Coastal, GLCC, Live!, U.S. Finals	November 02, 2015	100+	5	$ 19,300,000	$ 34,900,000
Aloha[14]	Aloha Spirit, GSSA, MAC	December 15, 2016	30	3	$ 2,440,000	$ 3,250,000
Spirit Celebration[15]	SCB	February 28, 2017	13	1	$ 2,200,000	$ 2,100,000
All Things Cheer[16]	ATC	April 21, 2017	4	1	$ 1,200,000	$ 160,000
Champion Spirit Group[17]	CSG, Team Champion	November 15, 2017	30	2	$ 1,900,000	$ 1,400,000
Mardi Gras Spirit[18]	MGS	December 01, 2017	12	1	$ 899,000	$ 750,000
Epic Brand[19]	EPIC, Spirit Unlimited, American Cheer, Champion Cheer	January 19, 2018	70+	2	$ 7,900,000	$ 12,900,000

Sources: (1) - VAR00129039, at -039; (2) - VAR00129039, at -039; (3) - VAR00129039, at -039; (4) - VAR00129039, at -039; (5) - VAR00129039, at -039; (6) - VAR00129039, at -039; (7) - VAR00129039, at -039; (8) - VAR00129039, at -040; (9) - VAR00129039, at -040; (10) - VAR00129039, at -040;(11) - VAR00129039, at -040; (12) - VAR00009293, at -361; https://www.fayobserver.com/story/business/2014/06/29/business-buzz-cheer-ltd-ceo/22191324007/; (13) - VAR00415063; VAR00009293, at -361; (14) - VAR00083645; VAR00009293, at -361; (15) - VAR00017827; VAR00009293, at -361; (16) - VAR00128725; VAR00009293, at -361; (17) - VAR00081770; VAR00009293, at -361; (18) - VAR00017807; (19) - VAR00076749; VAR00009293.

Notes: * denotes the number of acquired brand events that Varsity continued to operate as of the 2014-2015 season. See Varsity Registration Data. The number of acquired brand events, including events that Varsity discontinued, is likely much higher.

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Table 33. Varsity Acquired World Bids Events, 2004 - 2018

Acquired Event Producer	Acquisition Date	Number of World Bids Events	World Bids Events
National Spirit Group	February 12, 2004	1	NCA All Star Nationals (Dallas, TX)
Athletic Championships	June 27, 2005	1	Athletic Championships (Providence, RI)
World Spirit Federation	July 1, 2006	2	1. Indy Showdown (Indianapolis, IN) 2. WSF All Star Nationals (Louisville, KY)
Spirit Team Cheer & Dance Championships	October 2, 2006	1	The American Grand (Las Vegas, NV)
Spirit Sports	November 8, 2006	1	Duel in the Desert (Palm Springs, CA)
American Cheer Power	January 8, 2008	1	Midwest National Championship (Columbus, OH)
Spirit Xpress Cheerleading & All Star Challenge	April 15, 2008	1	Battle Under the Big Top (Atlanta, GA)
Spirit Cheer	October 24, 2008	1	Beast of the East (Atlantic City, NJ)
Spirit Festival	August 17, 2011	1	Spirit Fest All Star Cheer/Dance Nationals (Hartford, CT/Providence, RI)
PacWest	December 15, 2011	1	PacWest Nationals (Portland, OR)
Spirit Holding	December 20, 2012	1	Cheersport Nationals (Atlanta, GA)
Cheer Ltd. (CL)	June 20, 2014	1	Cheer Ltd Nationals at CANAM (Myrtle Beach, SC)
JamBrands (JF)	November 2, 2015	5	1. JAMfest - Cheer Super Nationals (Indianapolis, IN) 2. COA - Midwest National Championship (Columbus, OH) 3. Coastal - Battle at the Capitol (National Harbor, MD) 4. America's Best - National Championship (Kansas City, MO) 5. GLCC - The Showdown Grand Nationals (Chicago, IL)
Aloha Productions (ALO)	December 15, 2016	3	1. Mid Atlantic Championships (Wildwood, NJ) 2. GSSA Championships (Bakersfield, CA) 3. Aloha Championships (Sacramento/Fresno/Phoenix)
Spirit Celebration (SCB)	February 28, 2017	1	Spirit Celebration Christmas Championship (Dallas, TX)
All Things Cheer (ATC)	April 21, 2017	1	ATC International Championship (Bellevue, WA)
Champion Spirit Group (CSG)	November 15, 2017	1	CSG Super Nationals (Schaumburg, IL)
Mardi Gras Spirit (MGS)	December 1, 2017	1	MG Extravaganza National (New Orleans, LA)
EPIC	January 19, 2018	2	1. Battle at the Boardwalk Nationals (Atlantic City, NJ) 2. Reach the Beach All Star Nationals (Ocean City, MD)
All Acquired Event Producers		**27**	

Sources: World Bids Events Data; Varsity Registration Data; Pre-Acquisition Data.

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Table 34. Varsity's Implied Markets Shares for MSAs, 100-Mile Radius Circles Around MSAs, 250-Mile Radius Circles Around MSAs, and 500-Mile Radius Circles Around MSAs, 2016-2017 Season Through 2019-2020 Season

											MSAs Within 0 Miles			MSAs Within 100 Miles			MSAs Within 250 Miles			MSAs Within 500 Miles		
Region	MSA	CSA	Varsity Entrants in MSA	Varsity Entrants in Region	MSA Share of Varsity Region Entrants	Population of MSA	Population of Region	MSA Share of Region Population	Ratio of Varsity Entrant Share to Population Share	Varsity's Regional Market Share	Implied MSA Market Share	MSA Share of Varsity Nationwide Entrants	Low Market Share	Average Implied Market Share	MSA Share of Varsity Nationwide Entrants	Low Market Share	Average Implied Market Share	MSA Share of Varsity Nationwide Entrants	Low Market Share	Average Implied Market Share	MSA Share of Varsity Nationwide Entrants	Low Market Share
Share of Varsity Nationwide Entrants for MSAs with Presumed Market Power (Share >= 50%)												**82.7%**			**81.1%**			**93.9%**			**99.9%**	
Share of Varsity Nationwide Entrants for MSAs with Significant Competitive Concerns (Share >= 40% & < 50%)												**6.3%**			**7.2%**			**3.1%**			**0.0%**	
Share of Varsity Nationwide Entrants for MSAs Unlikely to have Adverse Competitive Concerns (Share < 40%)												**11.0%**			**11.7%**			**3.0%**			**0.1%**	
MW	Akron, OH MSA	Cleveland-Akron-Canton, OH CSA	529	373,375	0.1%	702,219	40,147,130	1.7%	8.1%	70.3%	6%	0.02%	Low Share	79%	0.02%		73%	0.02%		73%	0.02%	
	Ann Arbor, MI MSA	Detroit-Warren-Ann Arbor, MI CSA	3,913	373,375	1.0%	372,258	40,147,130	0.9%	113.0%	70.3%	79%	0.18%		25%	0.18%	Low Share	72%	0.18%		81%	0.18%	
	Canton-Massillon, OH MSA	Cleveland-Akron-Canton, OH CSA	3,273	373,375	0.9%	401,574	40,147,130	1.0%	87.6%	70.3%	62%	0.15%		79%	0.15%		75%	0.15%		73%	0.15%	
	Cape Girardeau, MO-IL MSA	Cape Girardeau-Sikeston, MO-IL CSA	1,858	373,375	0.5%	97,517	40,147,130	0.2%	204.9%	70.3%	144%	0.09%		66%	0.09%		82%	0.09%		81%	0.09%	
	Chicago-Naperville-Elgin, IL-IN-WI MSA	Chicago-Naperville, IL-IN-WI CSA	52,462	373,375	14.1%	9,618,502	40,147,130	24.0%	58.6%	70.3%	41%	2.43%		39%	2.43%	Low Share	57%	2.43%		81%	2.43%	
	Cincinnati, OH-KY-IN MSA	Cincinnati-Wilmington-Maysville, OH-KY-IN CSA	19,401	373,375	5.2%	2,256,884	40,147,130	5.6%	92.4%	70.3%	65%	0.90%		153%	0.90%		105%	0.90%		84%	0.90%	
	Cleveland-Elyria, OH MSA	Cleveland-Akron-Canton, OH CSA	21,692	373,375	5.8%	2,088,251	40,147,130	5.2%	111.7%	70.3%	79%	1.00%		35%	1.00%	Low Share	71%	1.00%		73%	1.00%	
	Columbia, MO MSA	Columbia-Moberly-Mexico, MO CSA	244	373,375	0.1%	210,864	40,147,130	0.5%	12.4%	70.3%	9%	0.01%	Low Share	9%	0.01%	Low Share	86%	0.01%		79%	0.01%	
	Columbus, OH MSA	Columbus-Marion-Zanesville, OH CSA	56,161	373,375	15.0%	2,138,926	40,147,130	5.3%	282.3%	70.3%	198%	2.60%		111%	2.60%		103%	2.60%		76%	2.60%	
	Dayton, OH MSA	Dayton-Springfield-Kettering, OH CSA	913	373,375	0.2%	814,049	40,147,130	2.0%	12.1%	70.3%	8%	0.04%	Low Share	111%	0.04%		83%	0.04%		81%	0.04%	
	Des Moines-West Des Moines, IA MSA	Des Moines-Ames-West Des Moines, IA CSA	5,576	373,375	1.5%	709,466	40,147,130	1.8%	84.5%	70.3%	59%	0.26%		59%	0.26%		75%	0.26%		78%	0.26%	
	Detroit–Warren–Dearborn, MI MSA	Detroit-Warren-Ann Arbor, MI CSA	9,946	373,375	2.7%	4,392,041	40,147,130	10.9%	24.3%	70.3%	17%	0.46%	Low Share	41%	0.46%		75%	0.46%		69%	0.46%	
	Evansville, IN-KY MSA	Evansville, IN-KY MSA	2,363	373,375	0.6%	314,049	40,147,130	0.8%	80.9%	70.3%	57%	0.11%		57%	0.11%		106%	0.11%		82%	0.11%	
	Fayetteville-Springdale-Rogers, AR MSA	Fayetteville-Springdale-Rogers, AR MSA	5,786	373,375	1.5%	546,725	40,147,130	1.4%	113.8%	70.3%	80%	0.27%		69%	0.27%		86%	0.27%		66%	0.27%	
	Fort Wayne, IN MSA	Fort Wayne-Huntington-Auburn, IN CSA	3,498	373,375	0.9%	419,601	40,147,130	1.0%	89.6%	70.3%	63%	0.16%		63%	0.16%		78%	0.16%		76%	0.16%	
	Indianapolis-Carmel-Anderson, IN MSA	Indianapolis-Carmel-Muncie, IN CSA	67,445	373,375	18.1%	2,111,040	40,147,130	5.3%	343.5%	70.3%	242%	3.12%		150%	3.12%		77%	3.12%		82%	3.12%	
	Kansas City, MO-KS MSA	Kansas City-Overland Park-Kansas City, MO-KS CSA	41,715	373,375	11.2%	2,192,035	40,147,130	5.5%	204.6%	70.3%	144%	1.93%		144%	1.93%		92%	1.93%		84%	1.93%	
	Madison, WI MSA	Madison-Janesville-Beloit, WI CSA	7,586	373,375	2.0%	680,796	40,147,130	1.7%	119.8%	70.3%	84%	0.35%		45%	0.35%		38%	0.35%	Low Share	78%	0.35%	
	Milwaukee-Waukesha, WI MSA	Milwaukee-Racine-Waukesha, WI CSA	5,837	373,375	1.6%	1,574,731	40,147,130	3.9%	39.9%	70.3%	28%	0.27%	Low Share	42%	0.27%		71%	0.27%		80%	0.27%	
	Minneapolis-St. Paul-Bloomington, MN-WI MSA	Minneapolis-St. Paul, MN-WI CSA	11,428	373,375	3.1%	3,690,261	40,147,130	9.2%	33.3%	70.3%	23%	0.53%	Low Share	25%	0.53%	Low Share	37%	0.53%	Low Share	57%	0.53%	
	Omaha-Council Bluffs, NE-IA MSA	Omaha-Council Bluffs-Fremont, NE-IA CSA	21,114	373,375	5.7%	967,604	40,147,130	2.4%	234.6%	70.3%	165%	0.98%		165%	0.98%		134%	0.98%		62%	0.98%	
	Peoria, IL MSA	Peoria, IL MSA	2,410	373,375	0.6%	402,391	40,147,130	1.0%	64.4%	70.3%	45%	0.11%		34%	0.11%	Low Share	68%	0.11%		79%	0.11%	
	Rochester, MN MSA	Rochester-Austin, MN CSA	1,431	373,375	0.4%	226,329	40,147,130	0.6%	68.0%	70.3%	48%	0.07%		25%	0.07%	Low Share	35%	0.07%	Low Share	64%	0.07%	
	Saginaw, MI MSA	Saginaw-Midland-Bay City, MI CSA	2,839	373,375	0.8%	190,124	40,147,130	0.5%	160.6%	70.3%	113%	0.13%		25%	0.13%	Low Share	55%	0.13%		74%	0.13%	
	Springfield, IL MSA	Springfield-Jacksonville-Lincoln, IL CSA	369	373,375	0.1%	208,640	40,147,130	0.5%	19.0%	70.3%	13%	0.02%	Low Share	58%	0.02%		81%	0.02%		77%	0.02%	
	St. Louis, MO-IL MSA	St. Louis-St. Charles-Farmington, MO-IL CSA	23,586	373,375	6.3%	2,820,253	40,147,130	7.0%	89.9%	70.3%	63%	1.09%		62%	1.09%		128%	1.09%		82%	1.09%	
NE	Albany-Schenectady-Troy, NY MSA	Albany-Schenectady, NY CSA	869	367,548	0.2%	899,262	59,665,050	1.5%	15.7%	67.1%	11%	0.04%	Low Share	121%	0.04%		55%	0.04%		62%	0.04%	
	Allentown-Bethlehem-Easton, PA-NJ MSA	Allentown-Bethlehem-Easton, PA-NJ MSA	2,593	367,548	0.7%	861,889	59,665,050	1.4%	48.8%	67.1%	33%	0.12%	Low Share	29%	0.12%	Low Share	69%	0.12%		68%	0.12%	
	Atlantic City-Hammonton, NJ MSA	Philadelphia-Reading-Camden, PA-NJ-DE-MD CSA	26,428	367,548	7.2%	274,534	59,665,050	0.5%	1562.7%	67.1%	1048%	1.22%		41%	1.22%		68%	1.22%		72%	1.22%	
	Baltimore-Columbia-Towson, MD MSA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA CSA	27,377	367,548	7.4%	2,844,510	59,665,050	4.8%	156.2%	67.1%	105%	1.27%		74%	1.27%		61%	1.27%		74%	1.27%	
	Binghamton, NY MSA	Binghamton, NY MSA	636	367,548	0.2%	247,138	59,665,050	0.4%	41.8%	67.1%	28%	0.03%	Low Share	89%	0.03%		66%	0.03%		67%	0.03%	
	Boston-Cambridge-Newton, MA-NH MSA	Boston-Worcester-Providence, MA-RI-NH-CT CSA	17,463	367,548	4.8%	4,941,632	59,665,050	8.3%	57.4%	67.1%	38%	0.81%	Low Share	100%	0.81%		45%	0.81%		67%	0.81%	
	Buffalo-Niagara Falls, NY MSA	Buffalo-Cheektowaga-Cattaraugus, NY CSA	10,105	367,548	2.7%	1,166,902	59,665,050	2.0%	140.6%	67.1%	94%	0.47%		52%	0.47%		55%	0.47%		71%	0.47%	
	Harrisburg-Carlisle, PA MSA	Harrisburg-York-Lebanon, PA CSA	7,332	367,548	2.0%	591,712	59,665,050	1.0%	201.1%	67.1%	135%	0.34%		70%	0.34%		61%	0.34%		80%	0.34%	
	Hartford-East Hartford-Middletown, CT MSA	Hartford-East Hartford, CT CSA	15,107	367,548	4.1%	1,213,531	59,665,050	2.0%	202.1%	67.1%	136%	0.70%		96%	0.70%		56%	0.70%		66%	0.70%	
	Huntington-Ashland, WV-KY-OH MSA	Charleston-Huntington-Ashland, WV-OH-KY CSA	3,258	367,548	0.9%	359,862	59,665,050	0.6%	147.0%	67.1%	99%	0.15%		99%	0.15%		109%	0.15%		75%	0.15%	
	Lancaster, PA MSA	Lancaster, PA MSA	748	367,548	0.2%	552,984	59,665,050	0.9%	22.0%	67.1%	15%	0.03%	Low Share	82%	0.03%		64%	0.03%		69%	0.03%	
	Manchester-Nashua, NH MSA	Boston-Worcester-Providence, MA-RI-NH-CT CSA	589	367,548	0.2%	422,937	59,665,050	0.7%	22.6%	67.1%	15%	0.03%	Low Share	95%	0.03%		39%	0.03%	Low Share	67%	0.03%	
	Morgantown, WV MSA	Morgantown-Fairmont, WV CSA	1,409	367,548	0.4%	140,038	59,665,050	0.2%	163.3%	67.1%	110%	0.07%		116%	0.07%		89%	0.07%		79%	0.07%	
	New York-Newark-Jersey City, NY-NJ-PA MSA	New York-Newark, NY-NJ-CT-PA CSA	13,464	367,548	3.7%	20,140,470	59,665,050	33.8%	10.9%	67.1%	7%	0.62%	Low Share	36%	0.62%	Low Share	63%	0.62%		67%	0.62%	
	Ocean City, NJ MSA	Philadelphia-Reading-Camden, PA-NJ-DE-MD CSA	9,259	367,548	2.5%	95,263	59,665,050	0.2%	1577.8%	67.1%	1058%	0.43%		132%	0.43%		65%	0.43%		72%	0.43%	
	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD MSA	Philadelphia-Reading-Camden, PA-NJ-DE-MD CSA	25,138	367,548	6.8%	6,245,051	59,665,050	10.5%	65.3%	67.1%	44%	1.16%		47%	1.16%		68%	1.16%		71%	1.16%	
	Pittsburgh, PA MSA	Pittsburgh-New Castle-Weirton, PA-OH-WV CSA	25,285	367,548	6.9%	2,370,930	59,665,050	4.0%	173.1%	67.1%	116%	1.17%		81%	1.17%		78%	1.17%		76%	1.17%	
	Providence-Warwick, RI-MA MSA	Boston-Worcester-Providence, MA-RI-NH-CT CSA	22,825	367,548	6.2%	1,676,579	59,665,050	2.8%	221.0%	67.1%	148%	1.06%		100%	1.06%		54%	1.06%		67%	1.06%	
	Reading, PA MSA	Philadelphia-Reading-Camden, PA-NJ-DE-MD CSA	6,702	367,548	1.8%	428,849	59,665,050	0.7%	253.7%	67.1%	170%	0.31%		83%	0.31%		64%	0.31%		71%	0.31%	
	Richmond, VA MSA	Richmond, VA MSA	15,732	367,548	4.3%	1,314,434	59,665,050	2.2%	194.3%	67.1%	130%	0.73%		90%	0.73%		93%	0.73%		83%	0.73%	
	Rochester, NY MSA	Rochester-Batavia-Seneca Falls, NY CSA	674	367,548	0.2%	1,090,135	59,665,050	1.8%	10.0%	67.1%	7%	0.03%	Low Share	66%	0.03%		69%	0.03%		73%	0.03%	
	Salisbury, MD-DE MSA	Salisbury-Cambridge, MD-DE CSA	5,603	367,548	1.5%	418,046	59,665,050	0.7%	217.6%	67.1%	146%	0.26%		127%	0.26%		60%	0.26%		71%	0.26%	
	Springfield, MA MSA	Springfield, MA MSA	15,332	367,548	4.2%	699,162	59,665,050	1.2%	356.0%	67.1%	239%	0.71%		92%	0.71%		55%	0.71%		66%	0.71%	
	Syracuse, NY MSA	Syracuse-Auburn, NY CSA	6,822	367,548	1.9%	662,057	59,665,050	1.1%	167.3%	67.1%	112%	0.32%		44%	0.32%		44%	0.32%		67%	0.32%	
	Trenton-Princeton, NJ MSA	New York-Newark, NY-NJ-CT-PA CSA	23,620	367,548	6.4%	387,340	59,665,050	0.6%	989.9%	67.1%	664%	1.09%		41%	1.09%		66%	1.09%		69%	1.09%	
	Virginia Beach-Norfolk-Newport News, VA-NC MSA	Virginia Beach-Norfolk, VA-NC CSA	14,864	367,548	4.0%	1,799,674	59,665,050	3.0%	134.1%	67.1%	90%	0.69%		107%	0.69%		92%	0.69%		74%	0.69%	
	Washington-Arlington-Alexandria, DC-VA-MD-WV MSA	Washington-Baltimore-Arlington, DC-MD-VA-WV-PA CSA	47,853	367,548	13.0%	6,385,162	59,665,050	10.7%	121.7%	67.1%	82%	2.21%		91%	2.21%		63%	2.21%		79%	2.21%	
	Worcester, MA-CT MSA	Boston-Worcester-Providence, MA-RI-NH-CT CSA	19,753	367,548	5.4%	978,529	59,665,050	1.6%	327.7%	67.1%	220%	0.91%		100%	0.91%		52%	0.91%		67%	0.91%	
	York-Hanover, PA MSA	Harrisburg-York-Lebanon, PA CSA	708	367,548	0.2%	456,438	59,665,050	0.8%	25.2%	67.1%	17%	0.03%	Low Share	70%	0.03%		62%	0.03%		80%	0.03%	
SE	Asheville, NC MSA	Asheville-Marion-Brevard, NC CSA	2,793	732,498	0.4%	469,015	41,526,030	1.1%	33.8%	85.5%	29%	0.13%	Low Share	70%	0.13%		100%	0.13%		101%	0.13%	
	Atlanta-Sandy Springs-Alpharetta, GA MSA	Atlanta–Athens-Clarke County–Sandy Springs, GA-AL CSA	140,651	732,498	19.2%	6,089,815	41,526,030	14.7%	130.9%	85.5%	112%	6.50%		110%	6.50%		93%	6.50%		98%	6.50%	
	Birmingham-Hoover, AL MSA	Birmingham-Hoover-Talladega, AL CSA	8,867	732,498	1.2%	1,115,289	41,526,030	2.7%	45.1%	85.5%	39%	0.41%	Low Share	29%	0.41%	Low Share	92%	0.41%		97%	0.41%	
	Charleston-North Charleston, SC MSA	Charleston-North Charleston, SC MSA	2,134	732,498	0.3%	799,636	41,526,030	1.9%	15.1%	85.5%	13%	0.10%	Low Share	130%	0.10%		66%	0.10%		88%	0.10%	
	Charlotte-Concord-Gastonia, NC-SC MSA	Charlotte-Concord, NC-SC CSA	60,698	732,498	8.3%	2,660,329	41,526,030	6.4%	129.3%	85.5%	111%	2.81%		70%	2.81%		95%	2.81%		110%	2.81%	
	Chattanooga, TN-GA MSA	Chattanooga-Cleveland-Dalton, TN-GA CSA	12,440	732,498	1.7%	562,647	41,526,030	1.4%	125.3%	85.5%	107%	0.58%		112%	0.58%		100%	0.58%		83%	0.58%	
	Crestview-Fort Walton Beach-Destin, FL MSA	Crestview-Fort Walton Beach-Destin, FL MSA	4,990	732,498	0.7%	286,973	41,526,030	0.7%	98.6%	85.5%	84%	0.23%		53%	0.23%		83%	0.23%		93%	0.23%	
	Dalton, GA MSA	Chattanooga-Cleveland-Dalton, TN-GA CSA	1,062	732,498	0.1%	142,837	41,526,030	0.3%	42.2%	85.5%	36%	0.05%	Low Share	103%	0.05%		101%	0.05%		96%	0.05%	
	Deltona-Daytona Beach-Ormond Beach, FL MSA	Orlando-Lakeland-Deltona, FL CSA	19,584	732,498	2.7%	668,921	41,526,030	1.6%	166.0%	85.5%	142%	0.91%		245%	0.91%		77%	0.91%		83%	0.91%	
	Durham-Chapel Hill, NC MSA	Raleigh-Durham-Cary, NC CSA	3,938	732,498	0.5%	649,903	41,526,030	1.6%	34.4%	85.5%	29%	0.18%	Low Share	65%	0.18%		79%	0.18%		79%	0.18%	
	Greensboro-High Point, NC MSA	Greensboro–Winston-Salem–High Point, NC CSA	13,362	732,498	1.8%	776,566	41,526,030	1.9%	97.5%	85.5%	83%	0.62%		80%	0.62%		85%	0.62%		79%	0.62%	
	Greenville-Anderson, SC MSA	Greenville-Spartanburg-Anderson, SC CSA	1,228	732,498	0.2%	928,195	41,526,030	2.2%	7.5%	85.5%	6%	0.06%	Low Share	71%	0.06%		93%	0.06%		101%	0.06%	
	Gulfport-Biloxi, MS MSA	Gulfport-Biloxi, MS MSA	8,412	732,498	1.1%	416,259	41,526,030	1.0%	114.6%	85.5%	98%	0.39%		52%	0.39%		49%	0.39%		80%	0.39%	
	Hickory-Lenoir-Morganton, NC MSA	Hickory-Lenoir-Morganton, NC MSA	140	732,498	0.0%	365,276	41,526,030	0.9%	2.2%	85.5%	2%	0.01%	Low Share	66%	0.01%		94%	0.01%		93%	0.01%	
	Huntsville, AL MSA	Huntsville-Decatur, AL CSA	698	732,498	0.1%	491,723	41,526,030	1.2%	8.0%	85.5%	7%	0.03%	Low Share	72%	0.03%		99%	0.03%		82%	0.03%	
	Jackson, MS MSA	Jackson-Vicksburg-Brookhaven, MS CSA	5,279	732,498	0.7%	591,978	41,526,030	1.4%	50.6%	85.5%	43%	0.24%		43%	0.24%		54%	0.24%		69%	0.24%	
	Jacksonville, FL MSA	Jacksonville-St. Marys-Palatka, FL-GA CSA	6,450	732,498	0.9%	1,605,848	41,526,030	3.9%	22.8%	85.5%	19%	0.30%	Low Share	19%	0.30%	Low Share	115%	0.30%		82%	0.30%	
	Jacksonville, NC MSA	Jacksonville, NC MSA	988	732,498	0.1%	204,576	41,526,030	0.5%	27.4%	85.5%	23%	0.05%	Low Share	10%	0.05%	Low Share	87%	0.05%		92%	0.05%	
	Knoxville, TN MSA	Knoxville-Morristown-Sevierville, TN CSA	33,792	732,498	4.6%	879,773	41,526,030	2.1%	217.7%	85.5%	186%	1.56%		124%	1.56%		94%	1.56%		81%	1.56%	
	Lakeland-Winter Haven, FL MSA	Orlando-Lakeland-Deltona, FL CSA	1,049	732,498	0.1%	725,046	41,526,030	1.7%	8.2%	85.5%	7%	0.05%	Low Share	149%	0.05%		77%	0.05%		84%	0.05%	
	Lexington-Fayette, KY MSA	Lexington-Fayette–Richmond–Frankfort, KY CSA	7,396	732,498	1.0%	516,811	41,526,030	1.2%	81.1%	85.5%	69%	0.34%		120%	0.34%		128%	0.34%		83%	0.34%	
	Louisville/Jefferson County, KY-IN MSA	Louisville/Jefferson County–Elizabethtown–Bardstown, KY-IN CSA	53,761	732,498	7.3%	1,285,439	41,526,030	3.1%	237.1%	85.5%	203%	2.49%		120%	2.49%		118%	2.49%		85%	2.49%	
	Memphis, TN-MS-AR MSA	Memphis-Forrest City, TN-MS-AR CSA	17,027	732,498	2.3%	1,337,779	41,526,030	3.2%	72.2%	85.5%	62%	0.79%		62%	0.79%		65%	0.79%		74%	0.79%	
	Miami-Fort Lauderdale-West Palm Beach, FL MSA	Miami-Port St. Lucie-Fort Lauderdale, FL CSA	10,840	732,498	1.5%	6,138,333	41,526,030	14.8%	10.0%	85.5%	9%	0.50%	Low Share	9%	0.50%	Low Share	84%	0.50%		74%	0.50%	
	Mobile, AL MSA	Mobile-Daphne-Fairhope, AL CSA	2,375	732,498	0.3%	430,197	41,526,030	1.0%	31.3%	85.5%	27%	0.11%	Low Share	62%	0.11%		47%	0.11%		77%	0.11%	
	Myrtle Beach-Conway-North Myrtle Beach, SC-NC MSA	Myrtle Beach-Conway, SC-NC CSA	32,513	732,498	4.4%	487,722	41,526,030	1.2%	377.9%	85.5%	323%	1.50%		107%	1.50%		74%	1.50%		103%	1.50%	
	Nashville-Davidson–Murfreesboro–Franklin, TN MSA	Nashville-Davidson–Murfreesboro, TN CSA	40,768	732,498	5.6%	1,989,519	41,526,030	4.8%	116.2%	85.5%	99%	1.89%		81%	1.89%		100%	1.89%		79%	1.89%	
	Orlando-Kissimmee-Sanford, FL MSA	Orlando-Lakeland-Deltona, FL CSA	185,034	732,498	25.3%	2,673,376	41,526,030	6.4%	392.4%	85.5%	335%	8.56%		149%	8.56%		77%	8.56%		83%	8.56%	
	Panama City, FL MSA	Panama City, FL MSA	2,602	732,498	0.4%	175,216	41,526,030	0.4%	84.2%	85.5%	72%	0.12%		64%	0.12%		35%	0.12%	Low Share	81%	0.12%	
	Pensacola-Ferry Pass-Brent, FL MSA	Pensacola-Ferry Pass, FL-AL CSA	5,327	732,498	0.7%	509,905	41,526,030	1.2%	59.2%	85.5%	51%	0.25%		53%	0.25%		47%	0.25%		77%	0.25%	
	Raleigh-Cary, NC MSA	Raleigh-Durham-Cary, NC CSA	27,652	732,498	3.8%	1,413,982	41,526,030	3.4%	110.9%	85.5%	95%	1.28%		65%	1.28%		79%	1.28%		83%	1.28%	
	Tampa-St. Petersburg-Clearwater, FL MSA	Tampa-St. Petersburg-Clearwater, FL MSA	16,433	732,498	2.2%	3,175,275	41,526,030	7.6%	29.3%	85.5%	25%	0.76%	Low Share	149%	0.76%		77%	0.76%		81%	0.76%	
	Wilmington, NC MSA	Wilmington, NC MSA	14	732,498	0.0%	285,905	41,526,030	0.7%	0.3%	85.5%	0%	0.00%	Low Share	166%	0.00%		87%	0.00%		92%	0.00%	
	Winston-Salem, NC MSA	Greensboro–Winston-Salem–High Point, NC CSA	2,201	732,498	0.3%	675,966	41,526,030	1.6%	18.5%	85.5%	16%	0.10%	Low Share	80%	0.10%		86%	0.10%		79%	0.10%	
SW	Albuquerque, NM MSA	Albuquerque-Santa Fe-Las Vegas, NM CSA	1,181	372,082	0.3%	916,528	27,508,761	3.3%	9.5%	49.2%	5%	0.05%	Low Share	5%	0.05%	Low Share	7%	0.05%	Low Share	86%	0.05%	
	Austin-Round Rock, TX MSA	Austin-Round Rock, TX MSA	4,201	372,082	1.1%	2,283,371	27,508,761	8.3%	13.6%	49.2%	7%	0.19%	Low Share	31%	0.19%	Low Share	54%	0.19%		52%	0.19%	
	Baton Rouge, LA MSA	Baton Rouge, LA MSA	7,513	372,082	2.0%	870,569	27,508,761	3.2%	63.8%	49.2%	31%	0.35%	Low Share	42%	0.35%		48%	0.35%		64%	0.35%	
	Beaumont-Port Arthur, TX MSA	Beaumont-Port Arthur, TX MSA	1,812	372,082	0.5%	397,565	27,508,761	1.4%	33.7%	49.2%	17%	0.08%	Low Share	32%	0.08%	Low Share	54%	0.08%		53%	0.08%	
	Dallas-Fort Worth-Arlington, TX MSA	Dallas-Fort Worth, TX-OK CSA	191,013	372,082	51.3%	7,637,387	27,508,761	27.8%	184.9%	49.2%	91%	8.83%		91%	8.83%		58%	8.83%		56%	8.83%	
	El Paso, TX MSA	El Paso-Las Cruces, TX-NM CSA	224	372,082	0.1%	868,859	27,508,761	3.2%	1.9%	49.2%	1%	0.01%	Low Share	1%	0.01%	Low Share	3%	0.01%	Low Share	42%	0.01%	
	Hammond, LA MSA	New Orleans-Metairie-Hammond, LA-MS CSA	28	372,082	0.0%	133,157	27,508,761	0.5%	1.6%	49.2%	1%	0.00%	Low Share	48%	0.00%		50%	0.00%		64%	0.00%	
	Hot Springs, AR MSA	Hot Springs-Malvern, AR CSA	12,173	372,082	3.3%	100,180	27,508,761	0.4%	898.4%	49.2%	442%	0.56%		69%	0.56%		83%	0.56%		70%	0.56%	
	Houston-The Woodlands-Sugar Land, TX MSA	Houston-The Woodlands, TX CSA	64,813	372,082	17.4%	7,122,240	27,508,761	25.9%	67.3%	49.2%	33%	3.00%	Low Share	32%	3.00%	Low Share	55%	3.00%		53%	3.00%	
	Little Rock-North Little Rock-Conway, AR MSA	Little Rock-North Little Rock, AR CSA	4,032	372,082	1.1%	748,031	27,508,761	2.7%	39.9%	49.2%	20%	0.19%	Low Share	69%	0.19%		68%	0.19%		78%	0.19%	
	Lubbock, TX MSA	Lubbock-Plainview-Levelland, TX CSA	788	372,082	0.2%	321,368	27,508,761	1.2%	18.1%	49.2%	9%	0.04%	Low Share	9%	0.04%	Low Share	9%	0.04%	Low Share	53%	0.04%	
	McAllen-Edinburg-Mission, TX MSA	McAllen-Edinburg, TX CSA	8	372,082	0.0%	870,781	27,508,761	3.2%	0.1%	49.2%	0%	0.00%	Low Share	0%	0.00%	Low Share	39%	0.00%	Low Share	52%	0.00%	
	New Orleans-Metairie, LA MSA	New Orleans-Metairie-Hammond, LA-MS CSA	18,491	372,082	5.0%	1,271,845	27,508,761	4.6%	107.5%	49.2%	53%	0.86%		48%	0.86%		48%	0.86%		61%	0.86%	
	San Antonio-New Braunfels, TX MSA	San Antonio-New Braunfels-Pearsall, TX CSA	36,576	372,082	9.8%	2,558,143	27,508,761	9.3%	105.7%	49.2%	52%	1.69%		31%	1.69%	Low Share	30%	1.69%	Low Share	52%	1.69%	
	Shreveport-Bossier City, LA MSA	Shreveport-Bossier City-Minden, LA CSA	10,871	372,082	2.9%	393,406	27,508,761	1.4%	204.3%	49.2%	100%	0.50%		100%	0.50%		61%	0.50%		59%	0.50%	
	Tulsa, OK MSA	Tulsa-Muskogee-Bartlesville, OK CSA	18,358	372,082	4.9%	1,015,331	27,508,761	3.7%	133.7%	49.2%	66%	0.85%		69%	0.85%		92%	0.85%		60%	0.85%	
W	Bakersfield, CA MSA	Bakersfield, CA MSA	4,306	316,917	1.4%	909,235	55,848,941	1.6%	83.5%	74.2%	62%	0.20%		42%	0.20%		63%	0.20%		61%	0.20%	
	Denver-Aurora-Lakewood, CO MSA	Denver-Aurora, CO CSA	18,729	316,917	5.9%	2,963,821	55,848,941	5.3%	111.4%	74.2%	83%	0.87%		108%	0.87%		110%	0.87%		109%	0.87%	
	Fort Collins, CO MSA	Fort Collins, CO MSA	8,703	316,917	2.7%	359,066	55,848,941	0.6%	427.1%	74.2%	317%	0.40%		108%	0.40%		110%	0.40%		120%	0.40%	
	Fresno, CA MSA	Fresno-Madera-Hanford, CA CSA	3,424	316,917	1.1%	1,008,654	55,848,941	1.8%	59.8%	74.2%	44%	0.16%		43%	0.16%		54%	0.16%		61%	0.16%	
	Las Vegas-Henderson-Paradise, NV MSA	Las Vegas-Henderson, NV-AZ CSA	23,976	316,917	7.6%	2,265,461	55,848,941	4.1%	186.5%	74.2%	138%	1.11%		138%	1.11%		67%	1.11%		66%	1.11%	
	Los Angeles-Long Beach-Anaheim, CA MSA	Los Angeles-Long Beach, CA CSA	43,750	316,917	13.8%	13,200,998	55,848,941	23.6%	58.4%	74.2%	43%	2.02%		56%	2.02%		60%	2.02%		61%	2.02%	
	Napa, CA MSA	San Jose-San Francisco-Oakland, CA CSA	151	316,917	0.0%	138,019	55,848,941	0.2%	19.3%	74.2%	14%	0.01%	Low Share	54%	0.01%		51%	0.01%		58%	0.01%	
	Ogden-Clearfield, UT MSA	Salt Lake City-Provo-Ogden, UT CSA	949	316,917	0.3%	694,863	55,848,941	1.2%	24.1%	74.2%	18%	0.04%	Low Share	294%	0.04%		294%	0.04%		156%	0.04%	
	Oxnard-Thousand Oaks-Ventura, CA MSA	Los Angeles-Long Beach, CA CSA	12	316,917	0.0%	843,843	55,848,941	1.5%	0.3%	74.2%	0%	0.00%	Low Share	42%	0.00%		53%	0.00%		61%	0.00%	
	Phoenix-Mesa-Chandler, AZ MSA	Phoenix-Mesa, AZ CSA	29,745	316,917	9.4%	4,845,832	55,848,941	8.7%	108.2%	74.2%	80%	1.38%		80%	1.38%		80%	1.38%		66%	1.38%	
	Portland-Vancouver-Hillsboro, OR-WA MSA	Portland-Vancouver–Salem, OR-WA CSA	27,193	316,917	8.6%	2,512,859	55,848,941	4.5%	190.7%	74.2%	142%	1.26%		142%	1.26%		91%	1.26%		77%	1.26%	
	Pueblo, CO MSA	Pueblo-Cañon City, CO CSA	1,999	316,917	0.6%	168,162	55,848,941	0.3%	209.5%	74.2%	155%	0.09%		155%	0.09%		59%	0.09%		86%	0.09%	
	Reno, NV MSA	Reno-Carson City-Fernley, NV CSA	700	316,917	0.2%	490,596	55,848,941	0.9%	25.1%	74.2%	19%	0.03%	Low Share	19%	0.03%	Low Share	51%	0.03%		74%	0.03%	
	Riverside-San Bernardino-Ontario, CA MSA	Los Angeles-Long Beach, CA CSA	35,834	316,917	11.3%	4,599,839	55,848,941	8.2%	137.3%	74.2%	102%	1.66%		56%	1.66%		60%	1.66%		61%	1.66%	
	Sacramento-Roseville-Folsom, CA MSA	Sacramento-Roseville, CA CSA	12,653	316,917	4.0%	2,397,382	55,848,941	4.3%	93.0%	74.2%	69%	0.59%		77%	0.59%		51%	0.59%		63%	0.59%	
	Salt Lake City, UT MSA	Salt Lake City-Provo-Ogden, UT CSA	43,007	316,917	13.6%	1,257,936	55,848,941	2.3%	602.5%	74.2%	447%	1.99%		294%	1.99%		294%	1.99%		103%	1.99%	
	San Diego-Chula Vista-Carlsbad, CA MSA	San Diego-Chula Vista-Carlsbad, CA MSA	10,036	316,917	3.2%	3,298,634	55,848,941	5.9%	53.6%	74.2%	40%	0.46%	Low Share	76%	0.46%		54%	0.46%		61%	0.46%	
	San Francisco-Oakland-Berkeley, CA MSA	San Jose-San Francisco-Oakland, CA CSA	10,800	316,917	3.4%	4,749,008	55,848,941	8.5%	40.1%	74.2%	30%	0.50%	Low Share	50%	0.50%		51%	0.50%		58%	0.50%	
	San Jose-Sunnyvale-Santa Clara, CA MSA	San Jose-San Francisco-Oakland, CA CSA	8,282	316,917	2.6%	2,000,468	55,848,941	3.6%	73.0%	74.2%	54%	0.38%		54%	0.38%		52%	0.38%		58%	0.38%	
	Santa Cruz-Watsonville, CA MSA	San Jose-San Francisco-Oakland, CA CSA	818	316,917	0.3%	270,861	55,848,941	0.5%	53.2%	74.2%	39%	0.04%	Low Share	50%	0.04%		49%	0.04%		58%	0.04%	
	Seattle-Tacoma-Bellevue, WA MSA	Seattle-Tacoma, WA CSA	18,291	316,917	5.8%	4,018,762	55,848,941	7.2%	80.2%	74.2%	60%	0.85%		60%	0.85%		84%	0.85%		84%	0.85%	
	Spokane-Spokane Valley, WA MSA	Spokane-Spokane Valley-Coeur d'Alene, WA-ID CSA	333	316,917	0.1%	585,784	55,848,941	1.0%	10.0%	74.2%	7%	0.02%	Low Share	7%	0.02%	Low Share	53%	0.02%		84%	0.02%	
	Stockton, CA MSA	San Jose-San Francisco-Oakland, CA CSA	10,018	316,917	3.2%	779,233	55,848,941	1.4%	226.6%	74.2%	168%	0.46%		54%	0.46%		52%	0.46%		58%	0.46%	
	Urban Honolulu, HI MSA	Urban Honolulu, HI MSA	1,709	316,917	0.5%	1,016,508	55,848,941	1.8%	29.6%	74.2%	22%	0.08%	Low Share	22%	0.08%	Low Share	22%	0.08%	Low Share	22%	0.08%	Low Share
	Visalia, CA MSA	Visalia, CA MSA	1,499	316,917	0.5%	473,117	55,848,941	0.8%	55.8%	74.2%	41%	0.07%		50%	0.07%		60%	0.07%		61%	0.07%	

Sources: Varsity Registration Data; CSA/MSA Information and Populations.

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Table 35. Comparison of Pre- and Post-Acquisition Prices for Acquired World Bids Events That Were Continued by Varsit

Brand	Acquisition Date	From	To	Number of Events	Real Price Change
ALO	12/15/2016	2016-2017	2017-2018	3	42.6%
		2017-2018	2018-2019	3	1.3%
		2018-2019	2019-2020	2	7.6%
ATC	4/21/2017	2016-2017	2017-2018	1	48.0%
		2017-2018	2018-2019	1	-1.6%
		2018-2019	2019-2020	1	11.7%
CSG	11/15/2017	2015-2016	2018-2019	1	65.1%
		2017-2018	2019-2020	1	-2.2%
EPIC	1/19/2018	2015-2016	2018-2019	2	29.1%
		2017-2018	2019-2020	1	3.7%
JF	11/2/2015	2013-2014	2016-2017	5	25.0%
		2015-2016	2017-2018	5	-1.4%
		2016-2017	2018-2019	5	-1.2%
		2017-2018	2019-2020	5	2.2%
MGS	12/1/2017	2017-2018	2018-2019	1	63.7%
		2018-2019	2019-2020	1	9.6%
SCB	2/28/2017	2016	2017-2018	1	128.1%
		2017-2018	2018-2019	1	-1.4%
		2018-2019	2019-2020	1	-7.1%
All 7		**Prior to Acq.**	**Post Acq.**	**14**	**35.5%**

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.

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Table 36. Summary of Pre- and Post-Acquisition Event Counts and Comparison of Averages Prices in New vs. Discontinued Acquired Brand Events

Brand	Acquisition Date	From	To	Events in Common	Events Only Before	Events Only After	Net Events Loss	Price Before (2018$)	Price After (2018$)	Real Price Increase
ALO	12/15/2016	2016-2017	2017-2018	15	10	1	9	$73.80	$126.39	71%
			2018-2019	12	13	1	12	$84.65	$121.44	43%
			2019-2020	7	18	1	17	$89.19	$127.30	43%
ATC	4/21/2017	2016-2017	2017-2018	2	2	1	1	$43.60	$118.37	171%
			2018-2019	2	2	1	1	$43.60	$98.74	126%
			2019-2020	2	2	1	1	$43.60	$120.09	175%
CSG	11/15/2017	2016-2017	2018-2019	7	18	2	16	$51.92	$84.48	63%
			2019-2020	5	20	1	19	$51.87	$64.75	25%
EPIC	1/19/2018	2016-2017	2018-2019	51	23	18	5	$56.05	$64.16	14%
			2019-2020	24	50	10	40	$70.76	$67.49	-5%
JF	11/2/2015	2014-2015	2016-2017	42	68	25	43	$59.96	$78.05	30%
			2017-2018	48	62	28	34	$60.89	$77.62	27%
			2018-2019	46	64	31	33	$60.51	$77.36	28%
			2019-2020	32	78	21	57	$62.80	$78.38	25%
MGS	12/1/2017	2016-2017	2017-2018	6	5	0	5	$73.83	N/A	N/A
			2018-2019	7	4	1	3	$73.53	$75.96	3%
			2019-2020	6	5	1	4	$73.65	$72.13	-2%
SCB	2/28/2017	2016	2017-2018	9	3	1	2	$44.52	$82.83	86%
			2018-2019	9	3	1	2	$44.52	$87.34	96%
			2019-2020	7	5	0	5	$47.31	N/A	N/A

Sources: Varsity Registration Data; Pre-Acquisition Data.

Notes: Real prices reported in 2018-2019 equivalent dollars.

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Table 37. Registration Fees for Aloha Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Season	Post-Acquisition Season	Event Name	World Bids Event	Pre-Acquisition Entrants	Post-Acquisition Entrants	Pre-Acquisition Price, 2018$	Post-Acquisition Price, 2018$	Real Price Change
ALO	12/15/2016	2016-2017	2017-2018	GSSA Cali Finale		1917	772	$124.19	$75.76	-39.0%
				Aloha Hawaii		675	319	$156.54	$135.27	-13.6%
				Aloha Central Valley		288	899	$124.19	$120.85	-2.7%
				Aloha Portland		1100	1029	$124.19	$121.47	-2.2%
				Aloha Las Vegas		1576	789	$124.19	$121.57	-2.1%
				GSSA Nor Cal Classic		930	1434	$124.19	$129.42	4.2%
				Aloha Phoenix	World Bids	1194	1711	$124.19	$130.77	5.3%
				GSSA So Cal Classic		898	701	$66.79	$70.96	6.2%
				GSSA Championships	World Bids	930	2450	$124.19	$137.31	10.6%
				Aloha Denver		503	1213	$66.79	$74.27	11.2%
				Aloha San Diego		843	465	$66.79	$74.74	11.9%
				GSSA NW Classic		420	564	$66.79	$74.93	12.2%
				Aloha Bay Area		535	573	$66.79	$76.30	14.2%
				Aloha Ontario		1114	526	$66.79	$76.88	15.1%
				Mid Atlantic DI & DII	World Bids	2952	2952	$66.79	$138.14	106.8%

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.

Notes: Real prices reported in 2018-2019 equivalent dollars.

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Table 38. Registration Fees for ATC Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Season	Post-Acquisition Season	Event Name	World Bids Event	Pre-Acquisition Entrants	Post-Acquisition Entrants	Pre-Acquisition Price, 2018$	Post-Acquisition Price, 2018$	Real Price Change
ATC	4/21/2017	2016-2017	2017-2018	ATC - Starz Championship - Portland		368	613	$46.17	$49.42	7.0%
				ATC International Championship DI & DII	World Bids	1654	2470	$83.12	$122.98	48.0%

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.
Notes: Real prices reported in 2018-2019 equivalent dollars.

Table 39. Registration Fees for CSG Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Season	Post-Acquisition Season	Event Name	World Bids Event	Pre-Acquisition Entrants	Post-Acquisition Entrants	Pre-Acquisition Price, 2018$	Post-Acquisition Price, 2018$	Real Price Change
CSG	11/15/2017	2016-2017	2018-2019	Dress Rehearsal		366	369	$51.47	$60.36	17.3%
				Twin Cities Challenge		598	1048	$50.88	$60.76	19.4%
				Madtown Challenge		284	882	$48.91	$62.97	28.7%
				Iowa Showdown		471	562	$48.81	$63.29	29.7%
				Duel in the Dells		944	1339	$88.14	$123.20	39.8%
				CSG Super Nationals	World Bids	3900	3443	$82.74	$136.63	65.1%
				Cheer For The Cure		726	316	$39.99	$68.98	72.5%

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.
Notes: Real prices reported in 2018-2019 equivalent dollars.

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Table 40. Registration Fees for EPIC Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Season	Post-Acquisition Season	Event Name	World Bids Event	Pre-Acquisition Entrants	Post-Acquisition Entrants	Pre-Acquisition Price, 2018$	Post-Acquisition Price, 2018$	Real Price Change
EPIC	1/19/2018	2016-2017	2018-2019	Six Flags Fall Extravaganza		182	96	$74.09	$49.06	-33.8%
				Retro Rock Cheerstarz		460	34	$38.02	$29.00	-23.7%
				Eastern Shore Classic		429	248	$50.44	$39.70	-21.3%
				Reach the Beach Dance National		961	174	$90.37	$73.66	-18.5%
				Season End Championship		2549	1262	$59.10	$48.53	-17.9%
				Delmarva Beach Classic		528	238	$45.00	$36.98	-17.8%
				Six Flags Spring Extravaganza		960	248	$71.43	$61.15	-14.4%
				Bowie State Cheerstarz		1559	299	$43.74	$37.52	-14.2%
				Platinum Nationals NY		815	674	$70.55	$61.84	-12.4%
				White Mountain Championship		364	589	$66.62	$58.81	-11.7%
				Platinum Nationals GA		781	645	$77.93	$68.92	-11.6%
				Classic Cheerstarz		1058	236	$38.57	$34.78	-9.8%
				Reach the Beach Daytona National		1624	1776	$84.52	$78.16	-7.5%
				Capital Cheerstarz		785	304	$40.09	$37.32	-6.9%
				Carolina Classic		709	628	$52.64	$49.57	-5.8%
				Maryland State Cheerstarz		954	231	$38.96	$37.10	-4.8%
				Maryland Cup Nationals		2806	1052	$72.26	$69.57	-3.7%
				Myrtle Beach Championship		650	534	$58.84	$57.31	-2.6%
				Magic City Beach Championship		300	695	$61.63	$60.66	-1.6%
				Platinum Nationals NC		235	370	$72.45	$71.75	-1.0%
				Keystone Championship		1342	748	$66.86	$66.41	-0.7%
				Platinum Nationals PA		1572	933	$70.22	$70.83	0.9%
				Cupid Championship		1442	444	$59.67	$61.46	3.0%
				All Capital Classic		555	88	$49.71	$51.34	3.3%
				Gold Coast Beach Championship 2020		304	899	$63.37	$65.60	3.5%
				Fairmont State Championship		215	668	$62.86	$65.49	4.2%
				MD Halloween Classic		697	78	$55.92	$58.54	4.7%
				Tidewater Beach Championship		763	788	$54.43	$58.10	6.7%
				River City Championship		507	1088	$57.74	$63.18	9.4%
				Chesapeake Championship		2077	614	$57.29	$62.76	9.5%
				PA Championship 2020		547	609	$54.32	$59.81	10.1%
				Champion Classic		466	459	$48.87	$53.97	10.4%
				DC Cheerstarz		1057	300	$37.34	$42.05	12.6%
				Reach the Beach All Star & College National	World Bids	5030	4680	$143.79	$162.08	12.7%
				Ultimate Cheerstarz		947	460	$36.43	$41.14	12.9%
				Cheerstarz NATIONALS		2040	554	$61.63	$70.25	14.0%
				Wolfpack Championship 2020		365	774	$55.60	$64.08	15.3%
				Valentine's Cheerstarz		859	361	$34.04	$39.65	16.5%
				Empire State Championship		322	625	$55.19	$64.36	16.6%
				Blue Crab Classic		499	244	$48.30	$56.34	16.6%
				Colonial Championship		947	596	$54.82	$64.36	17.4%
				Champions of the East Classic		869	621	$49.04	$57.82	17.9%
				Garden State Championship		1197	329	$58.65	$71.36	21.7%
				Philly Beach Championship		1314	441	$53.74	$66.27	23.3%
				Red Rose Championship		1516	1195	$54.29	$67.08	23.5%
				New Jersey Spring Classic		1138	239	$44.73	$56.04	25.3%
				Fall Fest Beach Classic		659	718	$46.35	$60.63	30.8%
				Mayflower Beach Championship		518	588	$56.48	$75.43	33.5%
				Reach the Beach Rec/School National		3762	14	$77.67	$105.00	35.2%
				Battle at the Boardwalk Nationals	World Bids	4525	4320	$103.19	$158.97	54.1%
				Winter Showdown Championship		1258	1702	$56.94	$106.98	87.9%

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.
Notes: Real prices reported in 2018-2019 equivalent dollars.

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Table 41. Registration Fees for JF Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Season	Post-Acquisition Season	Event Name	World Bids Event	Pre-Acquisition Entrants	Post-Acquisition Entrants	Pre-Acquisition Price, 2018$	Post-Acquisition Price, 2018$	Real Price Change
JF	11/2/2015	2014-2015	2016-2017	Hot Springs Nationals		698	1244	$122.07	$104.38	-14.5%
				Tulsa Nationals		1043	1462	$110.98	$107.87	-2.8%
				Sevierville Nationals		1674	1050	$117.84	$115.32	-2.1%
				Kansas City Nationals		1749	1996	$112.68	$111.90	-0.7%
				Louisville Nationals		2405	2350	$110.58	$120.44	8.9%
				Lite Detroit		974	900	$41.51	$47.56	14.6%
				JAMfest - JAM Bash Biloxi		1083	1097	$83.20	$95.43	14.7%
				LIVE! - Indianapolis		3194	1590	$77.07	$88.49	14.8%
				Richmond Nationals		1308	446	$98.80	$114.08	15.5%
				America's Best - Shreveport Championship		874	770	$37.66	$43.55	15.6%
				GLCC - Speedway Challenge		1638	922	$59.80	$69.18	15.7%
				JAMfest - Cheer Super Nationals	World Bids	8596	9375	$147.91	$172.42	16.6%
				JAMfest - JAM Bash Kissimmee		926	1462	$82.72	$96.78	17.0%
				Mid America Nationals		3366	2110	$99.84	$117.19	17.4%
				COA - Windy City Championship		1146	401	$60.73	$71.32	17.4%
				GLCC - Rock 'N Roll Hall of Fame National Champior		1013	1295	$86.42	$101.64	17.6%
				JAMfest - Boston Nationals		1712	1782	$107.14	$126.03	17.6%
				Cornhusker Championship		1036	977	$57.15	$67.32	17.8%
				Coastal - Six Flags Coaster		1849	791	$58.95	$69.64	18.1%
				JAMfest - JAM Bash Jacksonville		1108	502	$80.96	$96.72	19.5%
				America's Best - Detroit Championship		1236	1162	$42.18	$51.14	21.2%
				America's Best - National Championship	World Bids	3067	2455	$117.08	$142.96	22.1%
				JAMfest - Shreveport Nationals		811	1661	$87.43	$106.91	22.3%
				LIVE! - Chicago		1504	502	$75.41	$92.75	23.0%
				Santa's Challenge		1194	838	$61.28	$75.71	23.6%
				JAMfest - JAM Bash Nashville		2283	1941	$78.09	$97.22	24.5%
				America's Best - Nashville Championship		2400	1910	$42.50	$53.69	26.3%
				Coastal - Battle at the Capitol - All Star Cheer & Danc	World Bids	2977	3008	$116.50	$147.24	26.4%
				Coastal - Battle at the Capitol - All Star Cheer & Danc		5068	4870	$126.04	$164.50	30.5%
				COA - Midwest National Championship	World Bids	4152	4246	$116.49	$154.77	32.9%
				Very Scary Challenge		2595	1172	$60.80	$81.13	33.4%
				COA - Central Indiana Cup		2037	1187	$32.13	$43.23	34.6%
				GLCC - The Showdown Grand Nationals	World Bids	4062	3995	$119.53	$161.31	35.0%
				LIVE! - Philadelphia		1868	1569	$72.75	$98.34	35.2%
				Coastal - Six Flags Thrill Coaster		1629	978	$50.88	$69.93	37.4%
				COA - ULTIMATE Nationals		1859	683	$97.47	$136.98	40.5%
				America's Best - Denver Championship		1507	1055	$38.75	$55.58	43.4%
				Allegheny National Championship		1159	579	$67.76	$97.78	44.3%
				Heavy Hitters		2328	1517	$49.89	$72.02	44.4%
				Steeltown Regional		2157	1360	$32.89	$51.56	56.8%
				JAMfest - JAM Bash Pittsburgh		1240	1282	$61.52	$99.41	61.6%
				Dance Super Nationals		4398	622	$96.04	$173.88	81.1%

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.
Notes: Real prices reported in 2018-2019 equivalent dollars.

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Table 42. Registration Fees for MGS Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Season	Post-Acquisition Season	Event Name	World Bids Event	Pre-Acquisition Entrants	Post-Acquisition Entrants	Pre-Acquisition Price, 2018$	Post-Acquisition Price, 2018$	Real Price Change
MGS	12/1/2017	2016-2017	2018-2019	MG Bead Bonanza		334	834	$78.05	$76.33	-2.2%
				MG Bead Blast		733	1642	$81.38	$80.01	-1.7%
				MG Spirit Spectacular		796	1153	$73.14	$73.16	0.0%
				MG Jester Jubilation		284	740	$49.20	$62.93	27.9%
				MG Jester Jingle		354	546	$47.95	$62.01	29.3%
				MG Extravaganza National	World Bids	2334	3100	$73.11	$119.66	63.7%

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.
Notes: Real prices reported in 2018-2019 equivalent dollars.

Table 43. Registration Fees for SCB Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Season	Post-Acquisition Season	Event Name	World Bids Event	Pre-Acquisition Entrants	Post-Acquisition Entrants	Pre-Acquisition Price, 2018$	Post-Acquisition Price, 2018$	Real Price Change
SCB	2/28/2017	2016	2017-2018	Spirit Celebration Cowboy Classic		1566	691	$85.26	$82.21	-3.6%
				Spirit Celebration Grand Nationals		423	1127	$85.49	$82.65	-3.3%
				Spirit Celebration Dallas Cowboys Cheerleaders National Championship		4266	3600	$85.64	$83.02	-3.1%
				Spirit Celebration Fall Championship		1373	1340	$46.75	$56.20	20.2%
				Spirit Celebration CGA National Championship - D2		2532	1827	$66.92	$112.05	67.4%
				Spirit Celebration Louisiana State Championship		542	541	$38.55	$65.36	69.5%
				Spirit Celebration Dallas Cowboy Cheerleaders Fall Championship		1590	1726	$33.34	$57.20	71.6%
				Spirit Celebration Amazing Crown Jubilee Championship		2352	1394	$63.02	$111.47	76.9%
				Spirit Celebration Christmas Championship- 2 Day	World Bids	4608	3610	$55.59	$126.81	128.1%

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.

Notes: Real prices reported in 2018-2019 equivalent dollars.

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Table 44. Discontinued and New Aloha Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Season	Post-Acquisition Season	Observation Number	Old (Discontinued) Event Prices, 2018$	New Event Prices, 2018$	Real Price Change
ALO	12/15/2016	2016-2017	2017-2018	1	$66.79	$126.39	-
				2	$66.79	-	-
				3	$66.79	-	-
				4	$66.79	-	-
				5	$66.79	-	-
				6	$66.79	-	-
				7	$66.79	-	-
				8	$66.79	-	-
				9	$66.79	-	-
				10	$124.19	-	-
ALO	**12/15/2016**	**2016-2017**	**2017-2018**	**Average**	**$72.53**	**$126.39**	**74.3%**
				Median	**$66.79**	**$126.39**	**89.2%**

Sources: Varsity Registration Data; Pre-Acquisition Data.

Notes: Real prices reported in 2018-2019 equivalent dollars.

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Table 45. Discontinued and New ATC Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Season	Post-Acquisition Season	Observation Number	Old (Discontinued) Event Prices, 2018$	New Event Prices, 2018$	Real Price Change
ATC	4/21/2017	2016-2017	2017-2018	1	$43.07	$118.37	-
				2	$44.48	-	-
ATC	**4/21/2017**	**2016-2017**	**2017-2018**	**Average**	**$43.77**	**$118.37**	**170.4%**
				Median	**$43.77**	**$118.37**	**170.4%**

Sources: Varsity Registration Data; Pre-Acquisition Data.

Notes: Real prices reported in 2018-2019 equivalent dollars.

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Table 46. Discontinued and New CSG Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Season	Post-Acquisition Season	Observation Number	Old (Discontinued) Event Prices, 2018$	New Event Prices, 2018$	Real Price Change
CSG	11/15/2017	2016-2017	2018-2019	1	$29.10	$63.55	
				2	$30.01	$163.44	-
				3	$34.15	-	-
				4	$37.75	-	-
				5	$40.90	-	-
				6	$42.18	-	-
				7	$42.32	-	-
				8	$47.03	-	-
				9	$47.97	-	-
				10	$48.33	-	-
				11	$51.32	-	-
				12	$56.79	-	-
				13	$57.53	-	-
				14	$60.02	-	-
				15	$60.20	-	-
				16	$62.44	-	-
				17	$72.65	-	-
				18	$73.35	-	-
CSG	**11/15/2017**	**2016-2017**	**2018-2019**	**Average**	**$49.67**	**$113.50**	**128.5%**
				Median	**$48.15**	**$113.50**	**135.7%**

Sources: Varsity Registration Data; Pre-Acquisition Data.

Notes: Real prices reported in 2018-2019 equivalent dollars.

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Table 47. Discontinued and New EPIC Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Season	Post-Acquisition Season	Observation Number	Old (Discontinued) Event Prices, 2018$	New Event Prices, 2018$	Real Price Change
EPIC	1/19/2018	2016-2017	2018-2019	1	$7.86	$18.44	-
				2	$18.30	$35.59	-
				3	$36.00	$48.66	-
				4	$39.98	$56.99	-
				5	$41.67	$57.82	-
				6	$49.53	$59.39	-
				7	$50.44	$61.51	-
				8	$50.97	$62.14	-
				9	$55.40	$64.56	-
				10	$58.38	$65.53	-
				11	$59.93	$67.50	-
				12	$61.21	$70.80	-
				13	$62.31	$74.49	-
				14	$62.72	$75.08	-
				15	$63.72	$75.97	-
				16	$64.63	$132.96	-
				17	$65.04	-	-
				18	$65.74	-	-
				19	$66.54	-	-
				20	$68.60	-	-
				21	$70.46	-	-
				22	$72.74	-	-
				23	$105.32	-	-
EPIC	**1/19/2018**	**2016-2017**	**2018-2019**	**Average**	**$56.41**	**$64.21**	**13.8%**
				Median	**$61.21**	**$63.35**	**3.5%**

Sources: Varsity Registration Data; Pre-Acquisition Data.

Notes: Real prices reported in 2018-2019 equivalent dollars.

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Table 48. Discontinued and New JF Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Season	Post-Acquisition Season	Observation Number	Old (Discontinued) Event Prices, 2018$	New Event Prices, 2018$	Real Price Change
JF	11/2/2015	2014-2015	2016-2017	1	$1.27	$46.56	-
				2	$31.45	$52.93	-
				3	$33.57	$63.09	-
				4	$38.80	$66.39	-
				5	$39.48	$69.17	-
				6	$40.53	$69.57	-
				7	$41.19	$70.11	-
				8	$41.56	$70.52	-
				9	$43.35	$70.67	-
				10	$44.30	$72.01	-
				11	$48.04	$72.30	-
				12	$49.60	$72.37	-
				13	$50.53	$72.84	-
				14	$51.29	$74.91	-
				15	$51.59	$76.97	-
				16	$52.52	$77.83	-
				17	$52.57	$78.16	-
				18	$54.49	$78.29	-
				19	$54.92	$82.60	-
				20	$55.10	$86.59	-
				21	$55.36	$97.13	-
				22	$55.49	$97.38	-
				23	$55.82	$98.17	-
				24	$56.55	$114.39	-
				25	$56.98	$115.17	-
				26	$57.26	-	-
				27	$57.52	-	-
				28	$57.89	-	-
				29	$58.73	-	-
				30	$58.84	-	-
				31	$59.48	-	-
				32	$60.26	-	-
				33	$60.54	-	-
				34	$60.63	-	-
				35	$60.81	-	-
				36	$60.98	-	-
				37	$61.15	-	-
				38	$61.31	-	-
				39	$61.77	-	-
				40	$62.01	-	-
				41	$62.06	-	-
				42	$62.13	-	-
				43	$62.15	-	-
				44	$62.72	-	-
				45	$62.95	-	-
				46	$63.04	-	-
				47	$63.10	-	-
				48	$63.26	-	-
				49	$63.54	-	-
				50	$64.06	-	-
				51	$64.47	-	-
				52	$64.50	-	-
				53	$64.79	-	-
				54	$66.65	-	-
				55	$67.23	-	-
				56	$68.33	-	-
				57	$68.36	-	-
				58	$71.34	-	-
				59	$71.77	-	-
				60	$76.39	-	-
				61	$77.01	-	-
				62	$78.46	-	-
				63	$84.54	-	-
				64	$95.12	-	-
				65	$98.25	-	-
				66	$101.34	-	-
				67	$103.90	-	-
				68	$109.62	-	-
JF	**11/2/2015**	**2014-2015**	**2016-2017**	**Average**	**$60.54**	**$77.84**	**28.6%**
				Median	**$60.72**	**$72.84**	**20.0%**

Sources: Varsity Registration Data; Pre-Acquisition Data.
Notes: Real prices reported in 2018-2019 equivalent dollars.

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Table 49. Discontinued and New MGS Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Season	Post-Acquisition Season	Observation Number	Old (Discontinued) Event Prices, 2018$	New Event Prices, 2018$	Real Price Change
MGS	12/1/2017	2016-2017	2018-2019	1	$65.67	$75.96	-
				2	$73.28	-	-
				3	$75.34	-	-
				4	$77.59	-	-
MGS	**12/1/2017**	**2016-2017**	**2018-2019**	**Average**	**$72.97**	**$75.96**	**4.1%**
				Median	**$74.31**	**$75.96**	**2.2%**

Sources: Varsity Registration Data; Pre-Acquisition Data.

Notes: Real prices reported in 2018-2019 equivalent dollars.

Table 50. Discontinued and New SCB Brand Events, Pre- and Post-Acquisition

Brand	Acquisition Date	Pre-Acquisition Season	Post-Acquisition Season	Observation Number	Old (Discontinued) Event Prices, 2018$	New Event Prices, 2018$	Real Price Change
SCB	2/28/2017	2016	2017-2018	1	$32.87	$82.83	-
				2	$46.22	-	-
				3	$53.32	-	-
SCB	**2/28/2017**	**2016**	**2017-2018**	**Average**	**$44.13**	**$82.83**	**87.7%**
				Median	**$46.22**	**$82.83**	**79.2%**

Sources: Varsity Registration Data; Pre-Acquisition Data.

Notes: Real prices reported in 2018-2019 equivalent dollars.

HIGHLY CONFIDENTIAL PURSUANT TO PROTECTIVE ORDER

Table 51. Varsity's Event Count Market Share for World Bids Events, Nationwide, 2012-2013 Season Through 2019-2020 Season

Season	Varsity Events	Total Events	Varsity Event Share
2012-2013	12	34	35.3%
2013-2014	16	42	38.1%
2014-2015	18	42	42.9%
2015-2016	23	42	54.8%
2016-2017	23	42	54.8%
2017-2018	32	42	76.2%
2018-2019	33	42	78.6%
2019-2020	33	42	78.6%

Sources: Varsity Registration Data; World Bids Events Data.

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Table 52. Varsity's Event Count Market Share for World Bids Events, Midwest Region, 2012-2013 Season Through 2019-2020 Season

Region	Season	Varsity Events	Total Events	Varsity Event Share
MW	2012-2013	1	7	14.3%
	2013-2014	1	9	11.1%
	2014-2015	1	9	11.1%
	2015-2016	5	9	55.6%
	2016-2017	5	8	62.5%
	2017-2018	6	9	66.7%
	2018-2019	7	9	77.8%
	2019-2020	7	9	77.8%

Sources: Varsity Registration Data; World Bids Events Data.

Table 53. Varsity's Event Count Market Share for World Bids Events, Northeast Region, 2012-2013 Season Through 2019-2020 Season

Region	Season	Varsity Events	Total Events	Varsity Event Share
NE	2012-2013	2	8	25.0%
	2013-2014	3	9	33.3%
	2014-2015	3	9	33.3%
	2015-2016	4	9	44.4%
	2016-2017	4	9	44.4%
	2017-2018	7	9	77.8%
	2018-2019	7	9	77.8%
	2019-2020	7	9	77.8%

Sources: Varsity Registration Data; World Bids Events Data.

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Table 54. Varsity's Event Count Market Share for World Bids Events, Southeast Region, 2012-2013 Season Through 2019-2020 Season

Region	Season	Varsity Events	Total Events	Varsity Event Share
SE	2012-2013	3	6	50.0%
	2013-2014	6	9	66.7%
	2014-2015	8	9	88.9%
	2015-2016	8	9	88.9%
	2016-2017	8	10	80.0%
	2017-2018	7	8	87.5%
	2018-2019	7	8	87.5%
	2019-2020	7	8	87.5%

Sources: Varsity Registration Data; World Bids Events Data.

Table 55. Varsity's Event Count Market Share for World Bids Events, Southwest Region, 2012-2013 Season Through 2019-2020 Season

Region	Season	Varsity Events	Total Events	Varsity Event Share
SW	2012-2013	2	7	28.6%
	2013-2014	2	7	28.6%
	2014-2015	2	7	28.6%
	2015-2016	2	7	28.6%
	2016-2017	2	7	28.6%
	2017-2018	5	8	62.5%
	2018-2019	5	8	62.5%
	2019-2020	5	8	62.5%

Sources: Varsity Registration Data; World Bids Events Data.

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Table 56. Varsity's Event Count Market Share for World Bids Events, West Region, 2012-2013 Season Through 2019-2020 Season

Region	Season	Varsity Events	Total Events	Varsity Event Share
W	2012-2013	4	6	66.7%
	2013-2014	4	8	50.0%
	2014-2015	4	8	50.0%
	2015-2016	4	8	50.0%
	2016-2017	4	8	50.0%
	2017-2018	7	8	87.5%
	2018-2019	7	8	87.5%
	2019-2020	7	8	87.5%

Sources: Varsity Registration Data; World Bids Events Data.

Table 57. Regression Output for Overcharge Model for Acquired Brand Events: Sensitivity with Matched and Unmatched Events

Dependent Variable: Log Real Price

VARIABLES	(1) Regression 1	(2) Regression 2	(3) Regression 3	(4) Regression 4
World Bids Events Flag for ALO	0.355**	0.355**	0.358**	0.358**
	(0.145)	(0.158)	(0.152)	(0.152)
World Bids Events Flag for ATC	0.294	0.294***	0.471***	0.471***
	(0.183)	(0.061)	(0.047)	(0.047)
World Bids Events Flag for CSG	0.214	0.214**	0.272***	0.272***
	(0.311)	(0.099)	(0.017)	(0.017)
World Bids Events Flag for EPIC	0.915***	0.915***	0.670***	0.670***
	(0.111)	(0.033)	(0.085)	(0.085)
Post-Season Events Flag for JF	-0.025	-0.025	-0.023	-0.023
	(0.111)	(0.063)	(0.064)	(0.064)
World Bids Events Flag for JF	-0.008	-0.008	-0.006	-0.006
	(0.098)	(0.036)	(0.036)	(0.036)
World Bids Events Flag for MGS	0.348***	0.348***	0.341***	0.341***
	(0.133)	(0.087)	(0.087)	(0.087)
World Bids Events Flag for SCB	0.189*	0.189	0.285	0.285
	(0.115)	(0.166)	(0.203)	(0.203)
Overcharge Flag for ALO	0.239**	0.239**		
	(0.097)	(0.101)		
Overcharge Flag for ATC	0.464***	0.464***		
	(0.175)	(0.068)		
Overcharge Flag for CSG	0.287	0.287***		
	(0.193)	(0.099)		
Overcharge Flag for EPIC	0.094	0.094***		
	(0.061)	(0.032)		
Overcharge Flag for JF	0.233***	0.233***		
	(0.025)	(0.018)		
Overcharge Flag for MGS	0.211	0.211***		
	(0.139)	(0.074)		
Overcharge Flag for SCB	0.399***	0.399***		
	(0.089)	(0.084)		
Overcharge Flag			0.230***	0.230***
			(0.017)	(0.017)
Constant	4.066***	4.066***	4.065***	4.065***
	(0.021)	(0.033)	(0.033)	(0.033)
Observations	740	740	740	740
R-squared	0.704	0.704	0.699	0.699
Weighted by Athlete Count	Yes	Yes	Yes	Yes
Event Dummies	Yes	Yes	Yes	Yes
Robust Standard Errors	No	Yes	No	Yes

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.

Table 58. Price Overcharge for Varsity's Acquired Brand Events: Sensitivity with Matched and Unmatched Events

Brand	Overcharge	Robust Standard Error	t-statistic	P-value	95% Confidence Interval, Lower Bound	95% Confidence Interval, Upper Bound
ALO	21.3%	0.101	2.38	0.018	4.1%	35.4%
ATC	37.1%	0.068	6.80	0.000	28.1%	45.0%
CSG	25.0%	0.099	2.91	0.004	8.9%	38.2%
EPIC	9.0%	0.032	2.94	0.003	3.1%	14.5%
JF	20.8%	0.018	12.97	0.000	17.9%	23.5%
MGS	19.0%	0.074	2.85	0.005	6.4%	30.0%
SCB	32.9%	0.084	4.75	0.000	20.9%	43.1%
F-Test	H0: Overcharge_ALO = Overcharge_ATC = Overcharge_CSG = Overcharge_EPIC = Overcharge_JF = Overcharge_MGS = Overcharge_SCB = 0					
	F(7, 587) = 30.81					
	Prob > F = 0.000					
ALL BRANDS	20.5%	0.017	13.38	0.000	17.8%	23.2%

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.

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Table 59. Regression Output for Overcharge Model: Sensitivity for Weighted and Unweighted Regressions

Dependent Variable: Log Real Price				
	(1)	(2)	(3)	(4)
VARIABLES	Regression 1	Regression 2	Regression 3	Regression 4
Postseason Flag in MW	0.708	0.924	0.696	0.988
	(0.650)	(0.692)	(0.642)	(0.694)
World Bids Event Flag in MW	0.525***	0.502***	0.526***	0.486***
	(0.109)	(0.058)	(0.108)	(0.059)
School Flag in MW	-0.661***	-0.991***	-0.660***	-1.002***
	(0.040)	(0.072)	(0.039)	(0.071)
Postseason Flag in NE	0.124	-0.003	0.031	-0.084
	(0.103)	(0.087)	(0.101)	(0.086)
World Bids Event Flag in NE	0.655***	0.541***	0.676***	0.560***
	(0.041)	(0.035)	(0.042)	(0.035)
School Flag in NE	-0.888***	-1.120***	-0.865***	-1.101***
	(0.087)	(0.106)	(0.086)	(0.105)
Postseason Flag in SE	1.964***	2.012***	1.963***	2.014***
	(0.166)	(0.164)	(0.166)	(0.164)
World Bids Event Flag in SE	0.662***	0.486***	0.661***	0.488***
	(0.040)	(0.056)	(0.040)	(0.056)
School Flag in SE	-0.513***	-0.868***	-0.515***	-0.866***
	(0.041)	(0.061)	(0.040)	(0.060)
Postseason Flag in SW	0.619	-0.101	0.619	-0.100
	(0.496)	(0.086)	(0.496)	(0.085)
World Bids Event Flag in SW	0.747***	0.656***	0.748***	0.657***
	(0.043)	(0.057)	(0.043)	(0.057)
School Flag in SW	-0.551***	-0.944***	-0.551***	-0.943***
	(0.057)	(0.068)	(0.057)	(0.068)
Postseason Flag in W	0.494*	-0.014	0.534**	0.027
	(0.265)	(0.085)	(0.243)	(0.053)
World Bids Event Flag in W	0.885***	0.596***	0.885***	0.590***
	(0.051)	(0.050)	(0.049)	(0.050)
School Flag in W	-0.904***	-1.337***	-0.918***	-1.347***
	(0.057)	(0.062)	(0.056)	(0.061)
Overcharge Flag in MW	0.228***	0.267***		
	(0.032)	(0.030)		
Overcharge Flag in NE	0.339***	0.420***		
	(0.033)	(0.031)		
Overcharge Flag in SE	0.204***	0.359***		
	(0.046)	(0.055)		
Overcharge Flag in SW	0.213***	0.338***		
	(0.039)	(0.055)		
Overcharge Flag in W	-0.047	0.105		
	(0.066)	(0.068)		
Overcharge Flag			0.223***	0.320***
			(0.020)	(0.020)
Constant	4.036***	4.091***	4.026***	4.067***
	(0.039)	(0.028)	(0.028)	(0.036)
Observations	2,613	2,613	2,613	2,613
R-squared	0.560	0.774	0.557	0.773
Weighted by Athlete Count	No	Yes	No	Yes
Region Dummies	Yes	Yes	Yes	Yes
Event Dummies	Yes	Yes	Yes	Yes
Controls for Cost	No	No	No	No
Robust Standard Errors	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Sources: Varsity Registration Data; Pre-Acquisition Data; World Bids Events Data.

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Table 60. MG Extravaganza Was a 2-Day Event Prior to Its Acquisition by Varsity

Mardi Gras
Event Analysis

			2014 - 2015 Season			2015- 2016 Season			2016 - 2017 Season		
Event	Location	Date	Teams	Participants	Spectators	Teams	Participants	Spectators	Teams	Participants	Spectators
Jester Jingle	New Orleans	07-Dec-14	76	1,422							
		06-Dec-15				87	1,496				
		04-Dec-16							43	722	
Jester Jubilation	Charlotte	13-Dec-14	145	2,187							
		12-Dec-15				77	1,123				
		10-Dec-16							39	571	
MG Extravaganza	New Orleans	**1/17-18/15**	219	4,137							
		1/16-17/16				159	2,712				
		1/21-22/17							136	2,246	
MG Bead Bonanza	Hot Springs	24-Jan-15	45	687							
		23-Jan-16				63	921				
		14-Jan-17							40	513	
MG Bead Blitz	Trenton	08-Feb-15	51	888							
		21-Feb-16				98	1,588				
		18-Feb-17							30	376	
MG Battle for the Beads	San Marcos	22-Feb-15	75	985							
		28-Feb-16				111	1,401				
		25-Feb-17							35	387	
MG Party Gras	Lakeland	01-Mar-15	56	865							
		31-Jan-16				33	506				
		29-Jan-17							30	444	
MG Bead Blast	Hershey	3/7-8/15	175	2,838							
		3/12-13/16				121	1,693				
		3/11-12/17							79	1,086	
MG Bead Bash	Columbus	14-Mar-15	55	882							
		06-Feb-16				57	838				
		04-Feb-17							37	573	
MG Bead Blowout	Nashville	3/21-22/15	106	1,602							
		19-Mar-16				162	2,227				
		18-Mar-17							55	704	
MG Spirit Spectacular	St. Louis	12-Apr-15	81	1,248							
		03-Apr-16				118	1,671				
		02-Apr-17							61	977	
MG Bead Fest	Huntington	18-Apr-15	50	675							
		16-Apr-16				48	703				
		08-Apr-17							-	-	
Totals			1,134	18,416		1,134	16,879		585	8,599	

Sources: VAR00123779.

Notes: MG Extravaganza in New Orleans is highlighted, with a box around the competition dates in the three seasons.

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Table 61. Murphy's Backup Materials "NFHS Competitive Spirit Squad Participants, 2010-11 to 2018-19.xlsx"

	2018-2019		2017-2018		2016-2017		2015-2016		2014-2015		2013-2014		2012-2013		2011-2012		2010-2011	
State	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Alabama																		
Alaska	25	209	14	173	6	154	33	264	78	705	94	1228	32	304	48	686	36	1083
Arizona	322	6,098	261	5,877	319	5,983	299	5,938	294	5,879	335	6,480	366	6,497	354	5,965	319	5,648
Arkansas	77	1,846	88	1,617	54	1,443	51	1,594	93	1,649	97	1,759	114	1,615	74	1,379	175	231
California	880	15,705	911	13,059			561	8,846	308	10,029	242	8,700	250	8,298	275	7,585	470	9,356
Colorado	181	4,825	181	4,825	165	4,731	205	4,830	172	4,810	160	4,769	142	5,112	308	4,750	119	4,539
Connecticut	168	2,902	173	2,834	152	2,810	173	2,801	173	2,810	158	2,710	163	2,410	188	2,299	194	2,288
Delaware			1	166	26	218	88	224	88	113	88	113	7	179	5	164	11	124
District of Columbia		229		336		115		135		211		120		133		133		133
Florida	215	5,865	333	5,310	226	5,583	298	5,386	222	5,589	235	5,584	232	4,915	239	6,016	170	5,645
Georgia	85	4,819	89	4,672	108	4,711	129	4,857	102	5,107	102	5,107	115	5,207	126	5,385	82	5,369
Hawaii		805	34	900	48	802	48	802	55	851	42	872	70	787	28	844	28	844
Idaho	141	1,726	128	1,537	115	1,506	120	1,449	138	1,349	121	1,528	110	1,516	87	1,351	142	2,114
Illinois		6,837		6,592		6,916		7,069		6,946		7,281		7,599		8,088		8,331
Indiana																		
Iowa																		
Kansas		1,550																
Kentucky	166	5,081	175	4,891	173	4,952	171	4,983	197	4,730	207	5,328	179	5,114	174	4,221	299	4,828
Louisiana																		
Maine	31	1,030	43	1,286	39	1,450	37	1,134	25	1,433	23	1,628	25	1,646	21	1,609	65	1,747
Maryland																		
Massachusetts																		
Michigan		6,672		6,715		6,720		7,062		7,189		7,120		7,374		7,480		7,656
Minnesota																		
Mississippi	100	2,400	130	3,950	125	3,900	125	3,010	45	5,760	125	3,010	36	2,925	153	2,751	153	2,751
Missouri																		
Montana																		
Nebraska																		
Nevada																		
New Hampshire			29	1,452		1,373	25	1,424	34	1,547	33	1,152	16	1,750	18	1,735	32	1,699
New Jersey					**20**													
New Mexico	117	1,804	122	1,887		1,685	168	1,657	133	1,755	143	2,449	142	2,213	116	1,442		
New York	144	14,194	120	16,830	**175**	11,669	68	12,081	72	11,157	72	11,157	72	11,157	72	11,157		
North Carolina		19,360		20,250		20,617		20,601		16,404		16,404		16,362		11,520		11,460
North Dakota																		
Ohio	628	5,380	595	5,605	314	4,209	314	1,859	314	1,859	250	2,033	192	2,078	256	2,110	209	2,590
Oklahoma	125	2,662	117	5,485	126	9,307	101	9,247	35	9,560	120	5,430	349	5,193	87	4,000	40	3,900
Oregon	258	2,402	168	2,654	156	2,611	134	2,438		2,650		2,701	236	2,804	223	2,710	162	2,645
Pennsylvania		4,305		4,605		4,605		4,650		4,110		3,945		1,575		1,080		
Rhode Island	7	580	10	229	15	356	12	392	13	449	12	508	9	583	5	532	14	566
South Carolina		2,900		2,959		2,959		2,959		2,927		2,956		2,793		2,745		2,748
South Dakota		683		706		706		709		702		709		654		715		756
Tennessee																		
Texas		29,320		28,381		25,000												
Utah																		
Vermont	1	20	13	34	1	182	6	100	6	100	14	99	4	183	5	216	8	245
Virginia	66	4,178	72	4,297	95	4,484	122	4,515	90	4,814	117	5,007	114	4,956	123	5,074	86	4,784
Washington	201	4,971																
West Virginia				1,975		1,975		1,975		1,938	3	2,075		2,030	2	2,068		2,112
Wisconsin																		
Wyoming			44	580	47	511	34	540		631		631	36	546	45	497	32	526
US Total	3938	161358	3851	162669	2505	144243	3322	125531	2687	125763	2793	120593	3011	116508	3032	108307	2846	96718

Source: Dr. Murphy's Backup Materials, Excel File Named "NFHS Competitive Spirit Squad Participants, 2010-11 to 2018-19.xlsx"

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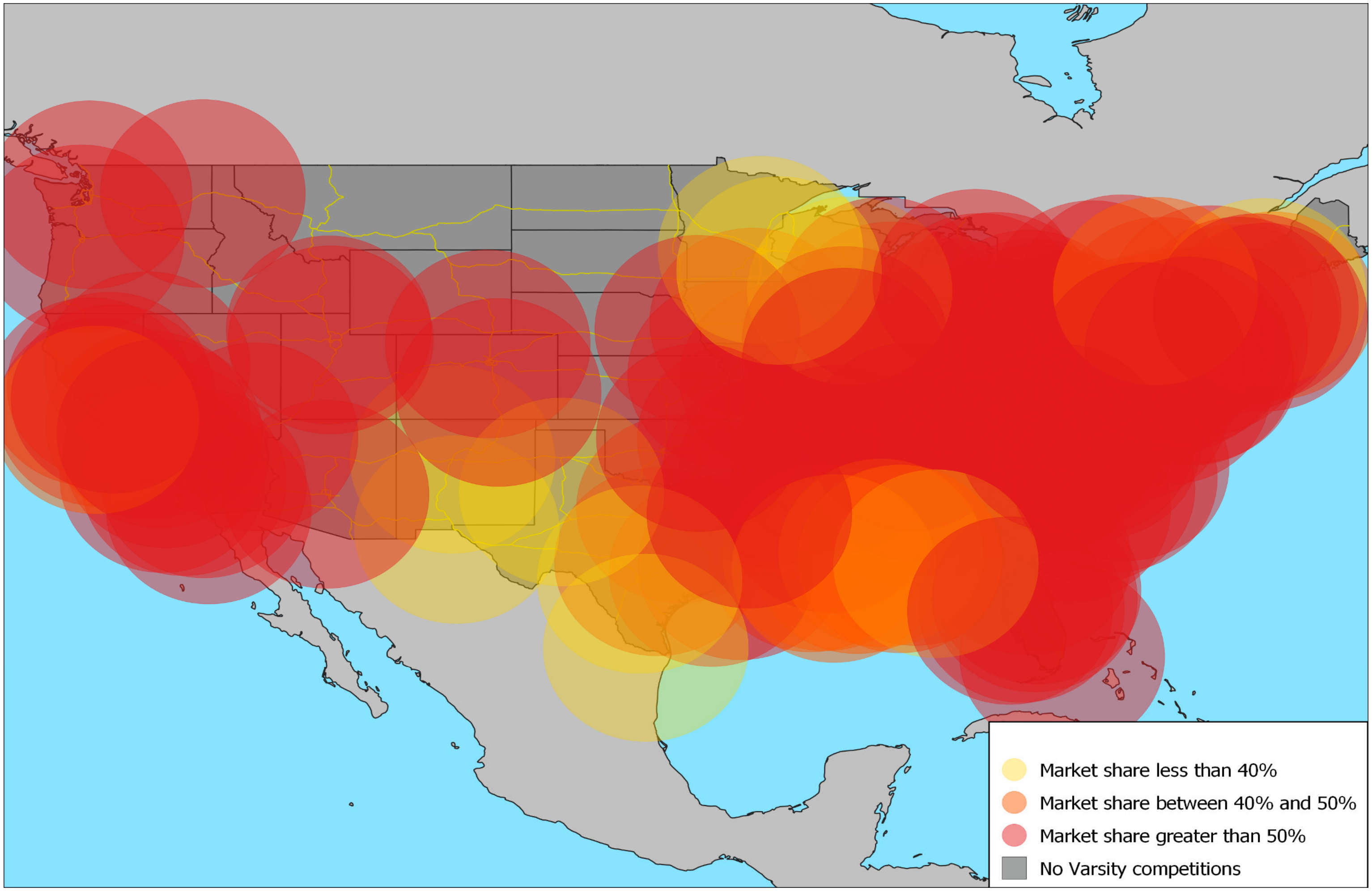
Figure 1. Map of 250-Mile Radius Regions Around All US MSAs with a Varsity Competition during the Class Period



Sources: Varsity Registration Data; World Bids Events Data; CSA/MSA Information and Populations.

Note: Red circles indicate 250-mile radius regions around MSAs with an average implied Varsity market share at or above 50% for which the DOJ/FTC Horizontal Merger Guidelines have established is a market concentration at levels that are "presumed to be likely to enhance market power." Orange circles indicate 250-mile radius regions around MSAs with an average implied Varsity market share at or above 40% and less than 50% for which the DOJ/FTC Horizontal Merger Guidelines have established is a market concentration at levels that "potentially raise significant competitive concerns." Green circles indicate 250-mile radius regions around MSAs with an average implied Varsity market share below 40% for which the DOJ/FTC Horizontal Merger Guidelines have established is a market concentration "unlikely to have adverse competitive effects." The "Urban Honolulu, HI MSA" MSA is not depicted in the map for space considerations. The circle around that Honolulu MSA is green.

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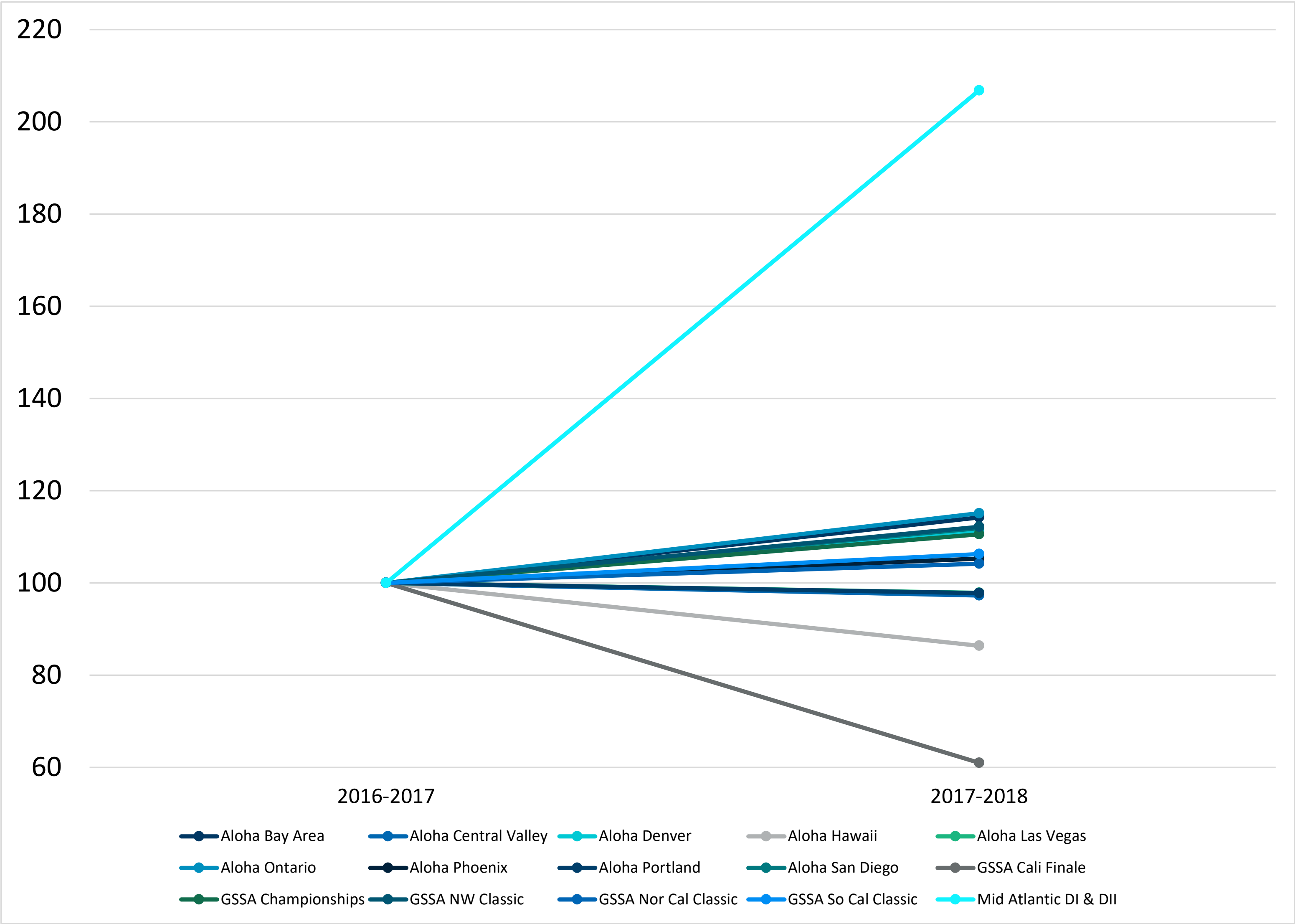
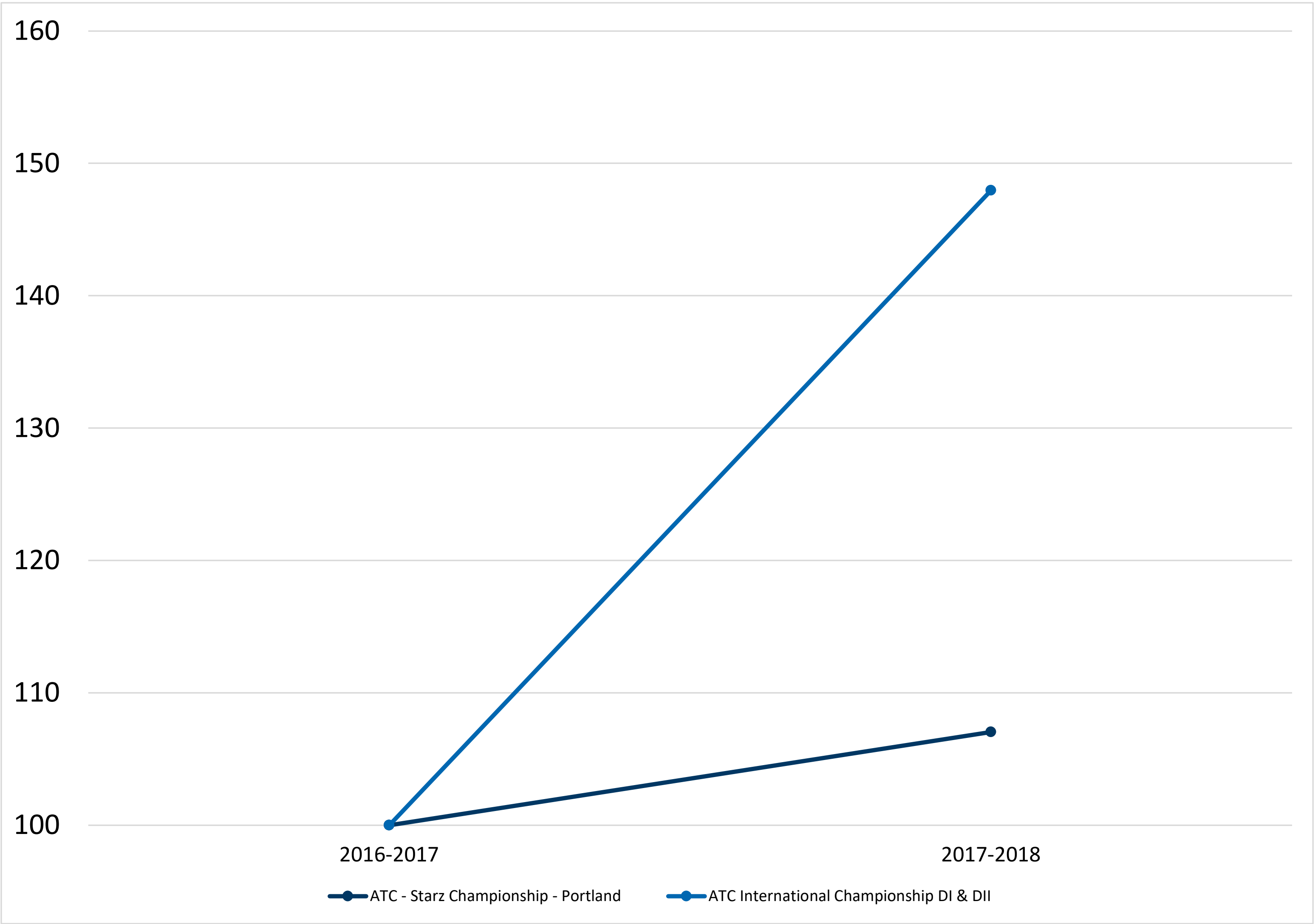
Figure 2. Registration Fees for Aloha Brand Events, Pre- and Post-Acquisition



Sources: Varsity Registration Data; Pre-Acquisition Data.
Notes: Real prices (2018$) normalized to 100 pre-acquisition.

Figure 3. Registration Fees for ATC Brand Events, Pre- and Post-Acquisition



Sources: Varsity Registration Data; Pre-Acquisition Data.

Notes: Real prices (2018$) normalized to 100 pre-acquisition.

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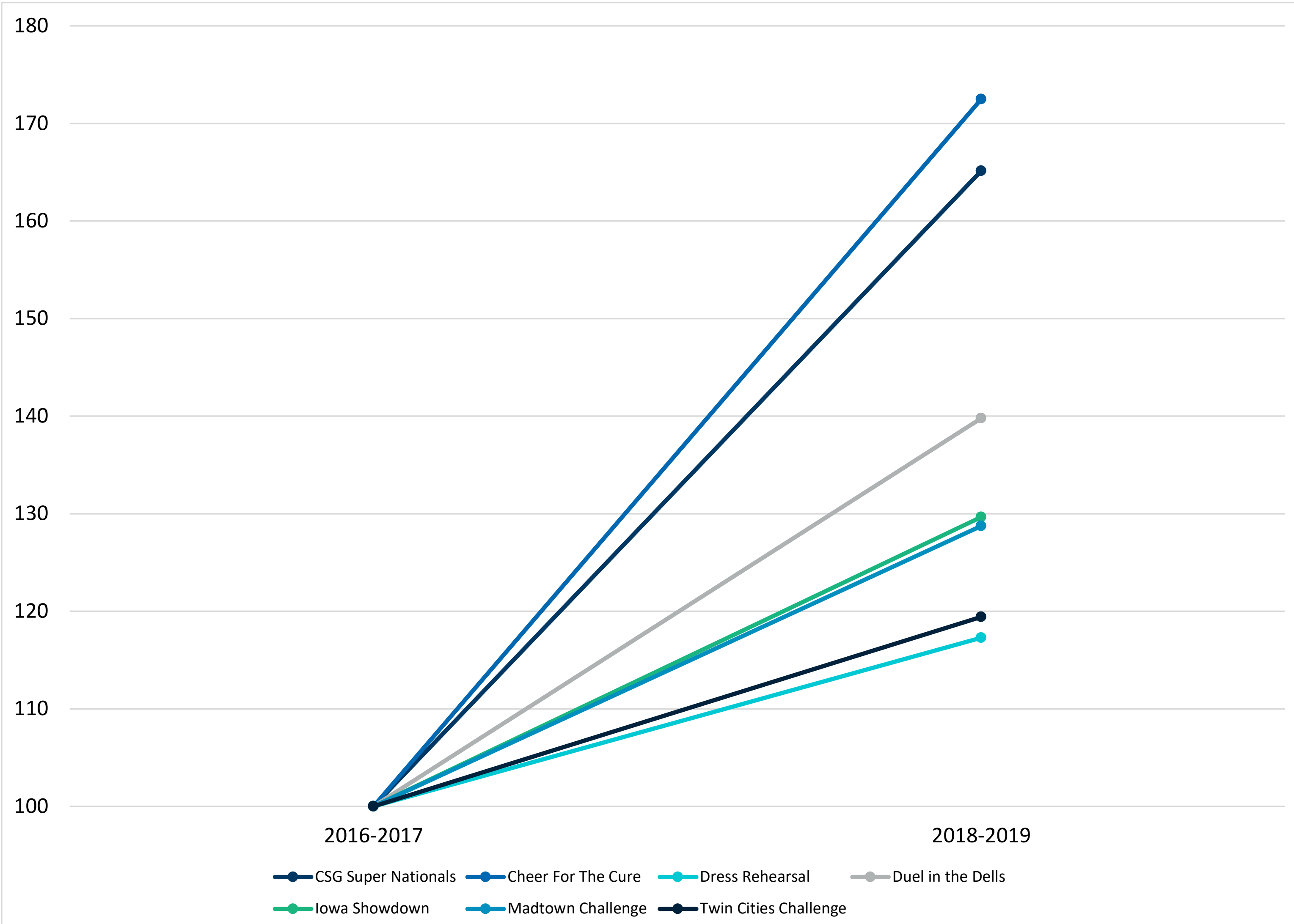
Figure 4. Registration Fees for CSG Brand Events, Pre- and Post-Acquisition



Sources: Varsity Registration Data; Pre-Acquisition Data.
Notes: Real prices (2018$) normalized to 100 pre-acquisition.

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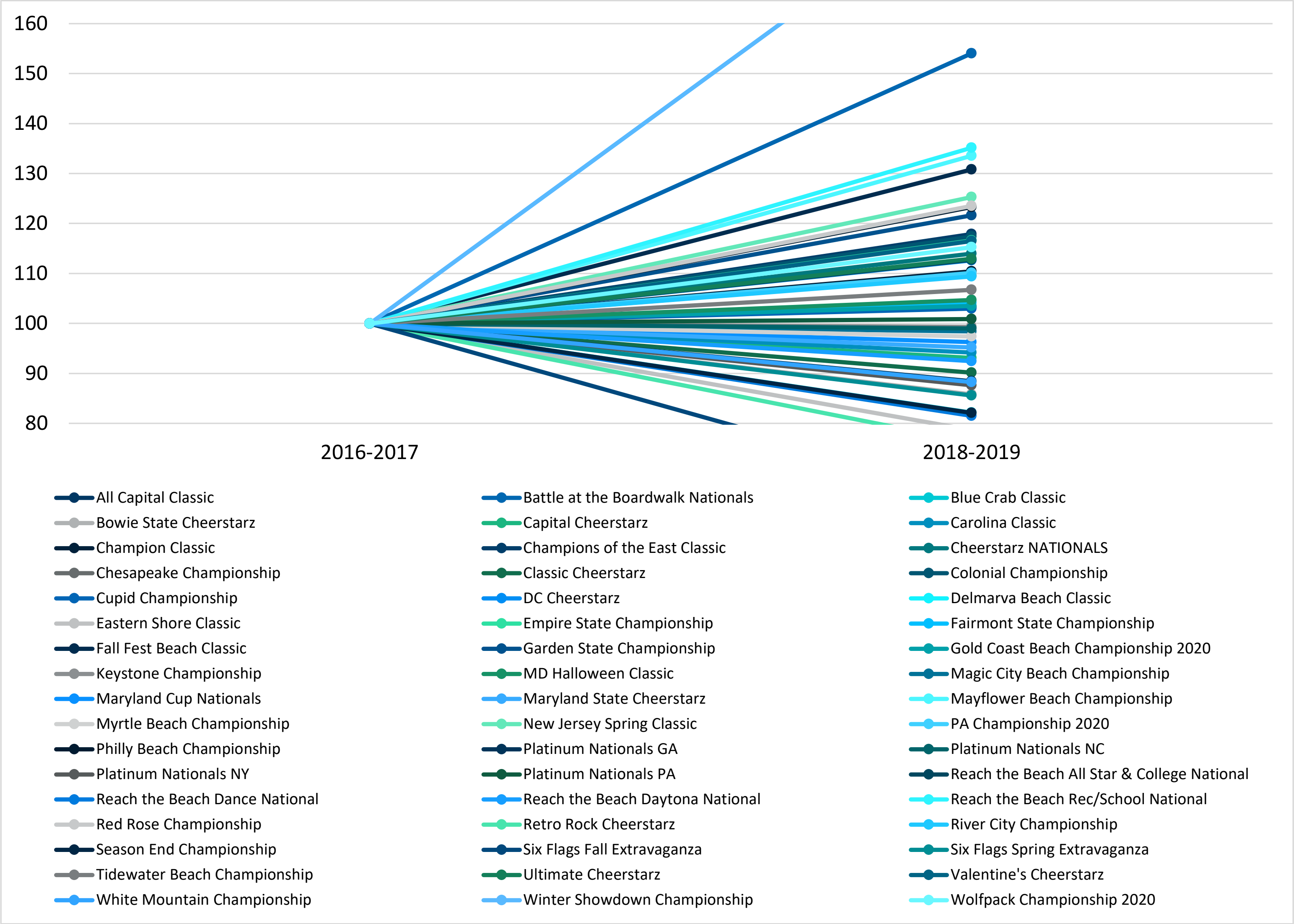
Figure 5. Registration Fees for EPIC Brand Events, Pre- and Post-Acquisition



Sources: Varsity Registration Data; Pre-Acquisition Data.
Notes: Real prices (2018$) normalized to 100 pre-acquisition.

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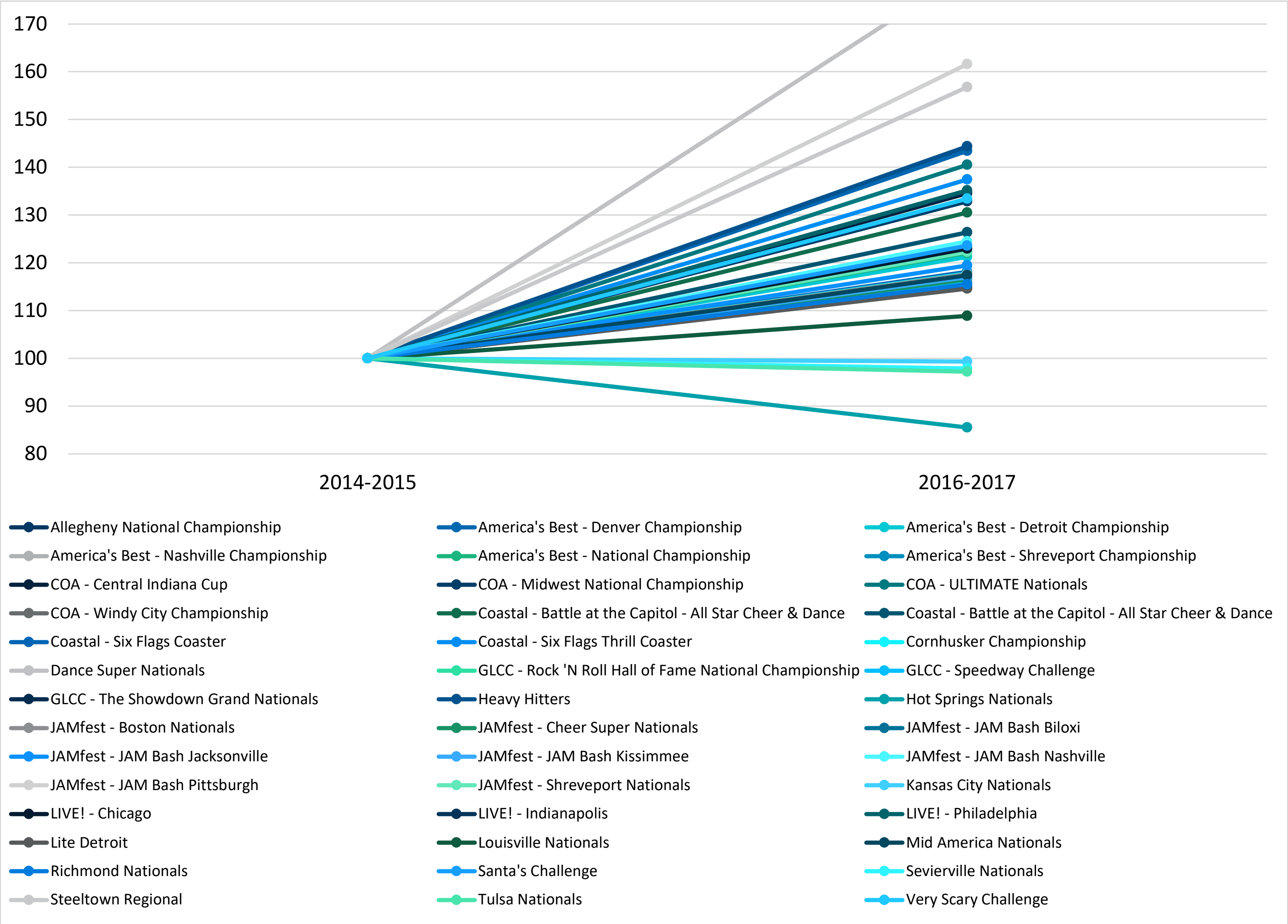
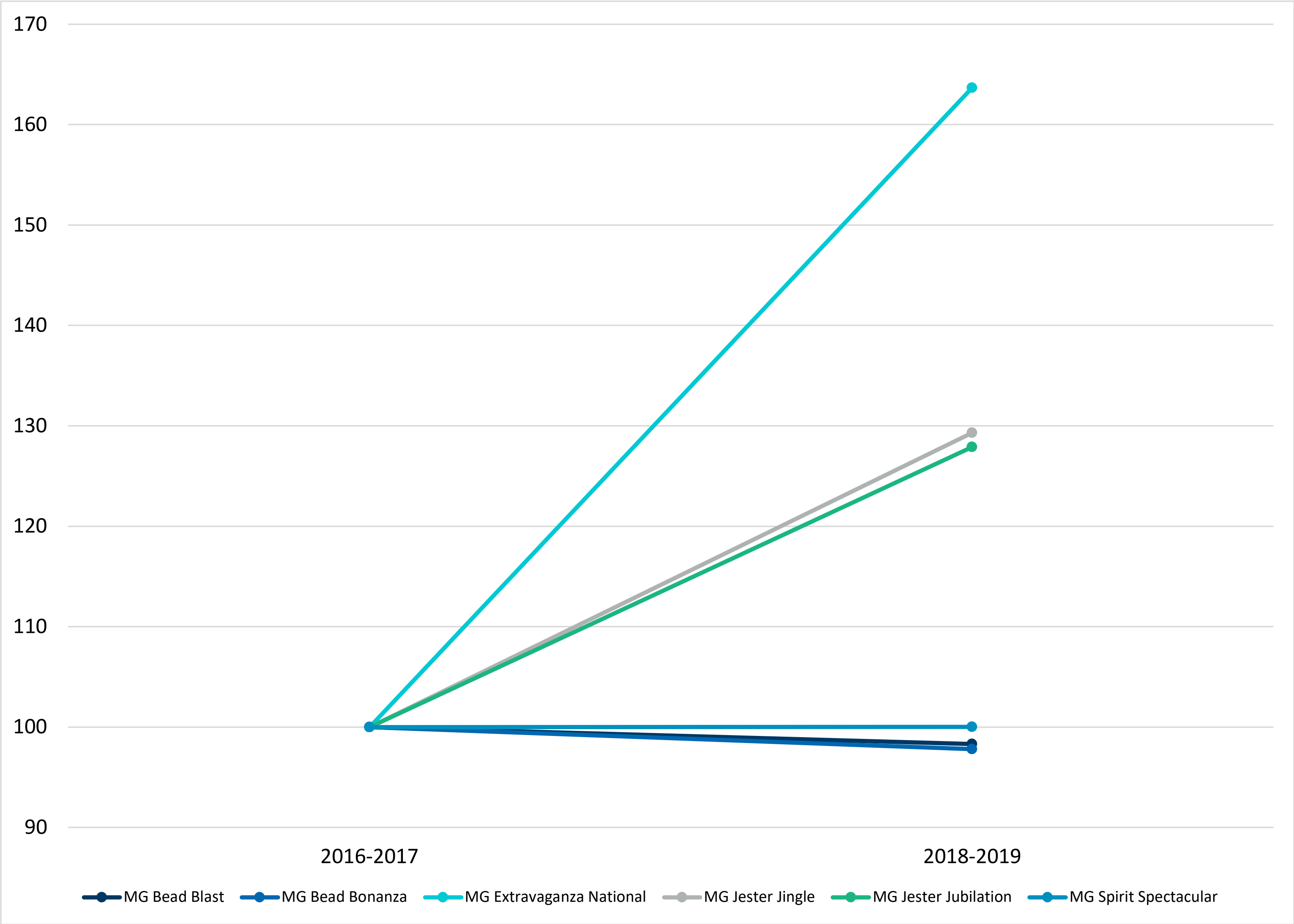
Figure 6. Registration Fees for JF Brand Events, Pre- and Post-Acquisition



Sources: Varsity Registration Data; Pre-Acquisition Data.
Notes: Real prices (2018$) normalized to 100 pre-acquisition.

Figure 7. Registration Fees for MGS Brand Events, Pre- and Post-Acquisition



Sources: Varsity Registration Data; Pre-Acquisition Data.
Notes: Real prices (2018$) normalized to 100 pre-acquisition.

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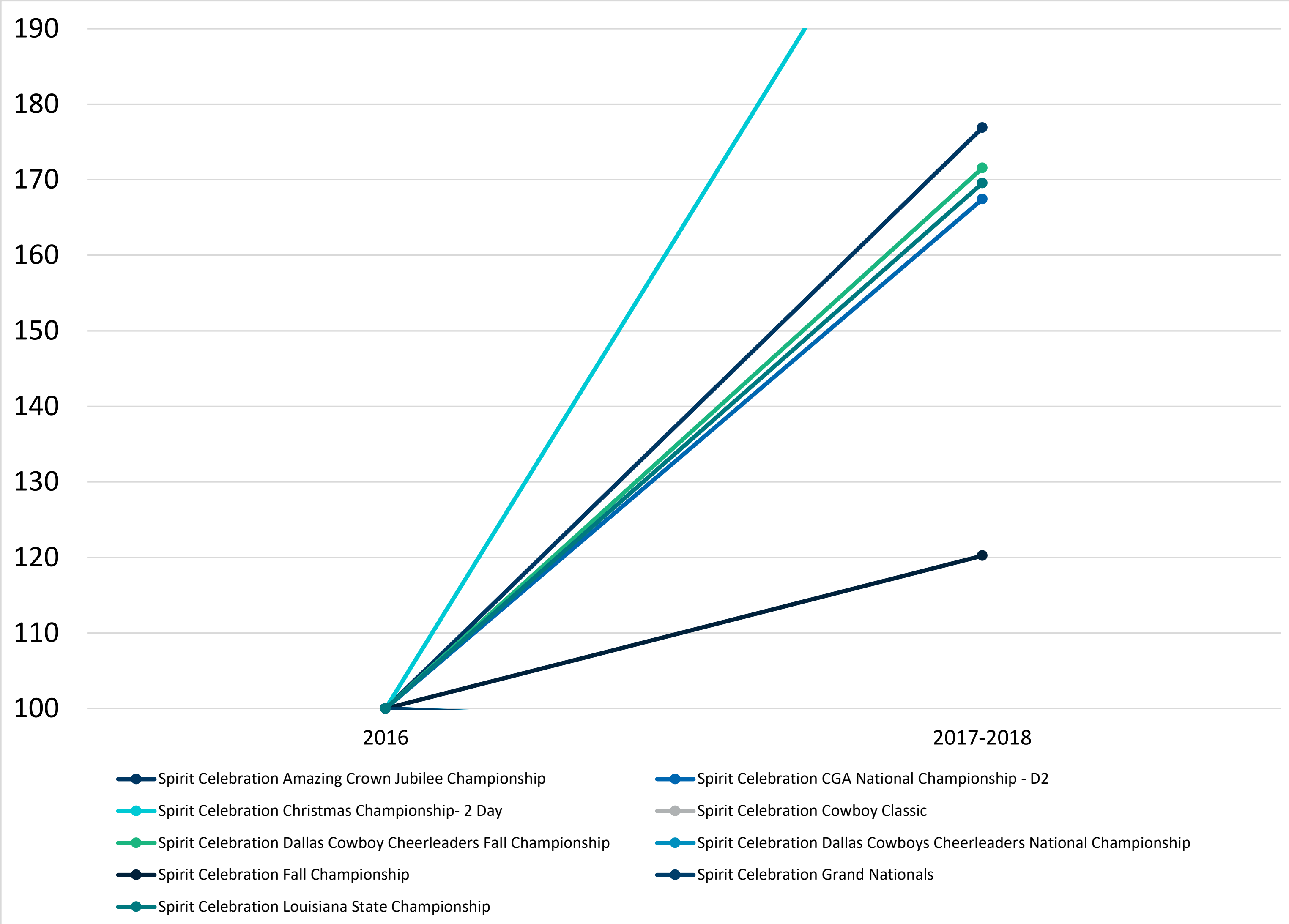
Figure 8. Registration Fees for SCB Brand Events, Pre- and Post-Acquisition



Sources: Varsity Registration Data; Pre-Acquisition Data.
Notes: Real prices (2018$) normalized to 100 pre-acquisition.